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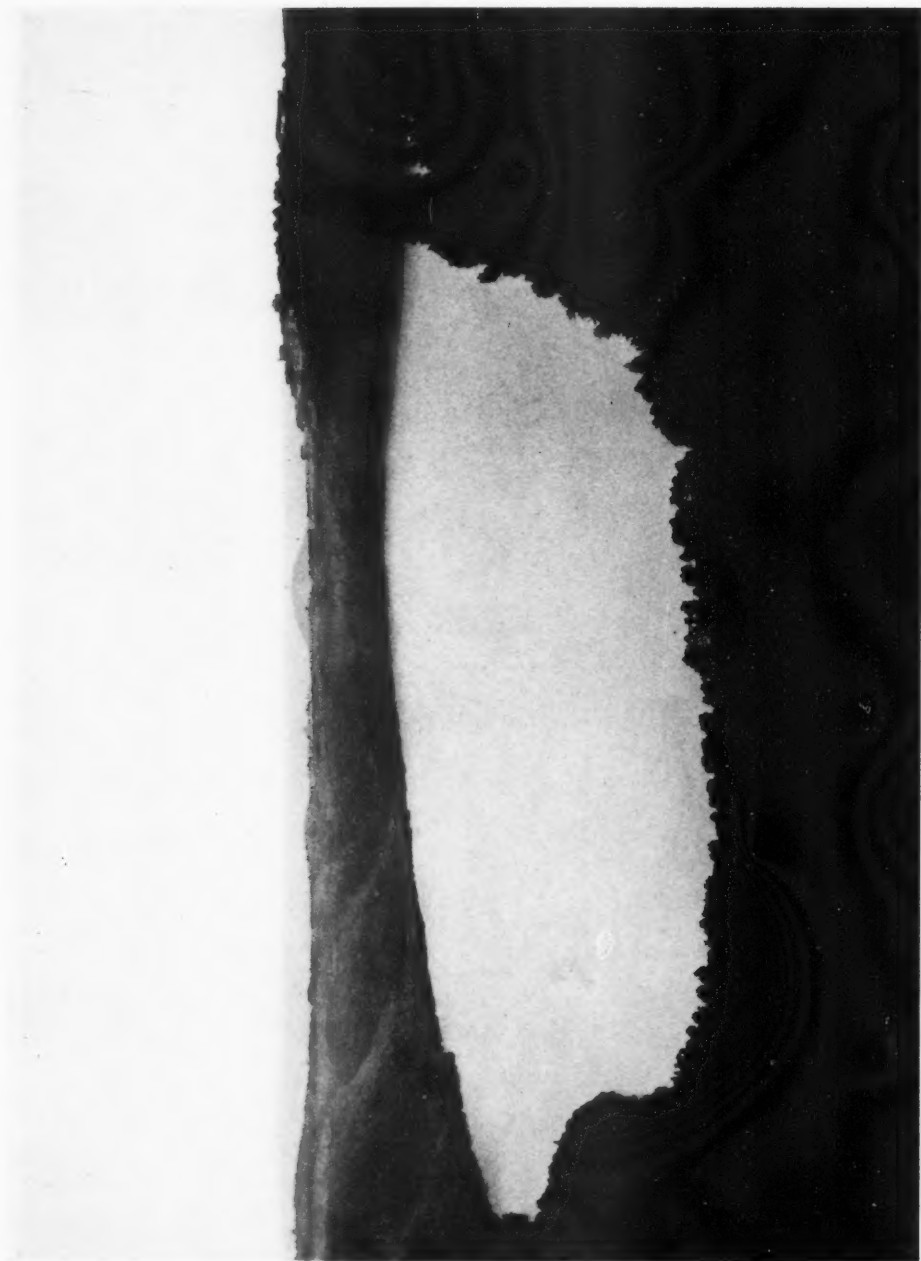
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LAKE NEMI NEAR ROME. THE "EYE OF DARK EMERALD" UP IN THE ALBAN HILLS BENEATH WHOSE WATERS
LIE HIDDEN TWO BARGES OF THE "MAD EMPEROR" CALIGULA.

ART *and* ARCHAEOLOGY

The Arts Throughout the Ages

VOLUME XXIII

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CLASSICAL ART FROM ANCIENT SHIPWRECKS

By WILLIAM STUART MESSER

The present brilliant discussion by Professor Messer of Dartmouth is especially commended to all readers of ART AND ARCHAEOLOGY because of its scholarly qualities and authority. It must be sharply distinguished from the irresponsible contributions to the daily and Sunday press, most of which are mines of misinformation. The recovery of isolated finds, such as that of the bronze statue of a youth in the sea off Marathon in the spring of 1925, does not come within the scope of this article.

ARCHAEOLOGY is a protean divinity: divine because of the superhuman revelations which she vouchsafes us on ancient art and civilization; protean because of the countless guises which she assumes to carry out her restless search. In scholarly garb she excavates a forum, clears a temple area, or reclaims a theater. Dressed as an unskilled Italian laborer she drives her pick through the roof of an underground basilica or breaks into a treasure house of early Christian painting. Everywhere she interferes with private rights, but governments protect her and the populace applauds her. Recently, as Horace's impatient lord, scornful of the land, she has pushed out from the

shore and taken her toll beneath the waters.

The last three decades have seen the exploration of as many shipwrecks—romantic tales of adventure each of them—yielding a return far greater than could be expected from any fabled galleons of the Spanish Main. Of these, two are Greek and one is Roman.

The scene of one of these tales of luck in discovery and heroism in execution is laid off the coast of Greece. Southwest of the Malean promontory in the Peloponnesus—the Cape Horn of the ancients—separated by a narrow channel from Cythera, where Aphrodite was fabled to have arisen from the sea, lies the rocky little island of Anticy-

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BRONZE STATUE OF A YOUNG MAN IN THE NATIONAL MUSEUM IN ATHENS, RECOVERED FROM AN ANCIENT WRECK AT ANTICYTHERA, BROKEN INTO MANY FRAGMENTS. IT IS PERHAPS THE MOST BEAUTIFUL GREEK BRONZE THAT EXISTS TO-DAY.

thera, known today by its Venetian name of Cerigotto. In 1900 some Greek sponge-fishermen of Syme were sailing homeward from the African coast for the holidays of the Hellenic *Pascha* when the sea, true to its ancient ill-repute, blew up a gale and forced them to take shelter in the lee of Anticythera. Here, anchored in the quieter waters of the channel, about sixty feet off shore, when the weather moderated somewhat, the divers descended to ply their trade until they could continue their journey. One of these at a depth of about two hundred

feet beheld a dark compact mass, one hundred and sixty-five feet long, composed of statues of bronze and of marble together with the remains of a wrecked ship.* The diver realized the incredulity with which his story would be received and so, on being hoisted to the surface, he took with him the right arm of a philosopher to prove the truth of what he was about to relate.

This was a new type of fishing even to these men, accustomed as they were to make their livelihood beneath the sea. On reaching the mainland they reported their find to the Greek government. Interest rose to fever heat and the lack of complete details did not detract from the public's expectations. The government arranged with the divers to continue their search. They had at first but slight success. The sea was perversely rough, making operations impossible except for short intervals of calmer water, and the work, demanding too long a stay beneath the surface, was perilous to the health of the crews. Finally the government got word that the divers had struck and were refusing to descend because of the arduousness of their task.

Something had to be done. The work could not be discontinued. National pride had been aroused, and at Athens the question of salvage had become a political issue. The *Mykale*, a government transport, was loaded with the latest machinery and the needed supplies and despatched to the spot. The State's ministers boarded the vessel and on arrival at Anticythera pleaded with the divers in the name of all Greece to begin the search once more. This appeal was successful for a while, but trouble arose again.

* For the fascinating details of this search see the full account of the Greek archaeologist, J. N. Svoronos, *Das athenen Nationalmuseum*; or the résumé of Svoronos in Cagnat, *A travers le monde romain*.

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The workers were sponge-fishers, not archaeologists, and the risks were undeniable: a sudden chop threatened at any time to sever a diver's connection with his pumps and thus to end his life. And even when this was not true the strain and the hardship of working at so great a depth were such that all suffered and one diver died of the effects.

The wreck was in deep water, but so close to the shore that the larger *Mykale* did not dare to approach the spot for fear of grounding, and the operations still had to be carried on from the smaller boats. Meanwhile an immense rock was impeding their operations and the divers wanted to cast it aside. A minister on board the transport had a happy inspiration: the "rock" might not be a rock, but perhaps a colossal statue corroded by the sea. The smaller boats threw cables around it and dragged it, still beneath the surface, to where the *Mykale* could bring her more powerful engines into play. When the great mass was hoisted to the deck, the "rock" proved to be a marble statue much damaged by its long stay in salt water,—a Hercules of heroic size, as huge as the Farnese Hercules of the Naples Museum.

Further attempts were made and the results were highly gratifying though the site is not even yet entirely exhausted. The interest which the report of the wreck had aroused was not destined to disappointment, as was realized when the objects recovered were brought to Athens and added to the permanent collection of the National Museum. The surface of the bronzes after scientific cleaning proved to be in good condition, but the marbles were badly damaged by the chemical action of the water and by marine life. Among the latter were the Hercules just men-

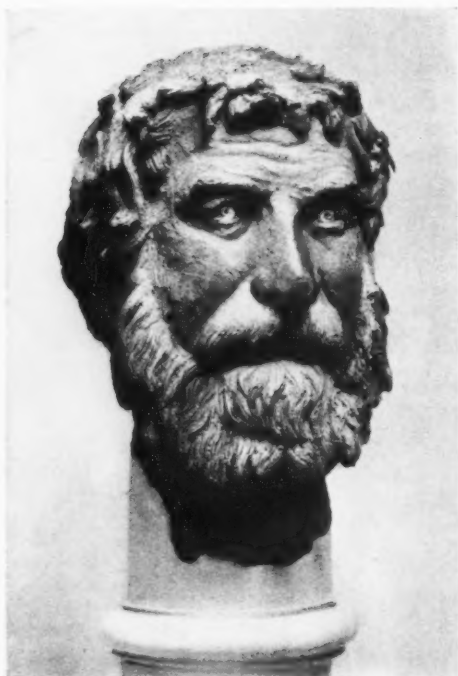


PROFILE OF THE ANTICYTHERA STATUE, SHOWING SUPERFICIAL RESEMBLANCE TO THE HERMES OF PRAXITELES.

tioned, twin brother of the Farnese Hercules, the head entirely worn away; a huge Apollo; two warriors at death grips; a resting Hermes; part of the torso of an Aphrodite of Cnidian type; a whole dissecting room of hands, arms, feet and legs. One hand and one foot, found covered by the sand, are as fresh as when they came from the sculptor's chisel. Parts of four horses, marble copies of bronze originals, have a special interest as showing a striking resemblance to the horses of St. Marks in Venice, the origin of which also is unknown.

The bronzes are the more important part of the collection. There are three excellent nude athletes, the head of a portrait statue of a thinker and, curi-

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BRONZE HEAD OF PORTRAIT STATUE. THE EYES WERE ENAMELED AND ARE MUCH CORRODED.

ously enough, the ship's astrolabe, a navigating instrument, the ancient counterpart of the modern sextant. But the gem of the find, recovered in many pieces and restored, is the more than life-size statue of a youth, variously identified as an Apollo, a Hermes, a Perseus or a Paris. Its importance can be estimated from the wide divergence of opinion as to its period and its authorship. Some have attributed it to the hand of even the greatest masters. This statue alone would place the cargo of the ship among the great archaeological discoveries of all time, though the passing years have modified, in some quarters, the first enthusiastic estimates.

What was this ship? When did it founder? Whither and whence was it

bound? Curiosity naturally raises these questions. But the evidence is not such as to make a definite reply possible. The date of the disaster has been variously placed from as early as 86 B. C. to a time as late as the Crusades. The Greek archaeologist Svoronos would like to believe the find a shipload of booty, bound from Argos to Constantinople some time around the year 328 A. D., to adorn the capital of the Eastern Empire. His defense of this theory is highly ingenious, and to the obvious objection that Anticythera is not on the way from Argos to Constantinople he replies that Poseidon's power obeys no traffic rules, and cites the sailors of his native land in his support. An earlier date than this, however, is congenial to the majority. One writer believes that we have here a pirate's hoard of statues, stolen from Greek towns, being carried to some central caché for later sale to the Romans. But whatever difference of opinion may exist on the score of these questions, on the great importance of the find there is not one dissenting voice.

The second of these ancient shipwrecks was discovered in 1907. Again the honor fell to Greek sponge-divers. On this occasion they were operating near the "stormy Syrtes" off the coast of Tunisia, eighty miles or so southward from the site of Carthage. When three and one half miles out from the small town of Mahdia, at a depth of one hundred and thirty feet, they came upon a mass of columns in the midst of which lay fragments of all sorts, particularly bits of bronze.* The romance of Anticythera was not unknown to them, and it did not take them long to decide upon the nature of their prize.

* For the details of the work of recovery see Merlin et Poinssot, *Monuments Piot* 17, 29 ff.; *Revue Archéologique* 18, 92 ff.

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They reported their find to the *Service des Antiquités de Tunisie* with the same type of corroborating evidence as at Cerigotto—sundry pieces of ancient statuary. The French government at once sent boats to the spot with divers, and the story of Anticythera was repeated—a tale of hardship and suffering and danger rewarded by gratifying achievement.

Today the objects recovered from the wreck fill four rooms of the *Musée Alaoui* in Tunis, the repository of the antiquities of Roman Africa and one of the great archaeological museums of the world. They are the most important collection in this museum as well as the most dramatic. Many of the objects have a very exceptional value for the history of Greek art. As you enter the first room, paved with mosaics from Roman Carthage and El Djem, you come upon a statue which is an original, and a signed original at that. It is an archaizing herm of a bearded Dionysus signed by Boethus, a well-known Hellenistic sculptor of Asia Minor of the second century B. C., who had statues at such noted shrines as Olympia and



TWO MARBLE PIECES.

Salt water and marine life have treated the marble much less kindly. The Hercules of heroic size suggests the Farnese Hercules of the Naples Museum.

Delos. The inscription runs: Βοηθὸς Καλχηδόνιος ἐποίησεν.

In the next room is a bronze Eros or Cupid, fifteen and a half inches high, the most beautiful piece of all. Extravagant claims have been made for it. The French savants who published the find would have it a statue from the hand of Praxiteles himself, the one described by the rhetorician Callistratus; or, if not this, at least a good replica of the statue made shortly after the time of the great master and thoroughly in his manner.

The other objects include statues and statuettes of gods and satyrs; dancing girls; busts of bronze or of marble; panthers; the head of a horse; two vases, one a mate of the Borghese vase in the Louvre, the other of a vase in the Campo Santo at Pisa; candelabra; fluted columns thirteen feet high (there were sixty of them in the wrecked ship); finely wrought capitals, Ionic and Corinthian, and other objects of furniture. The comic touch is contributed by a group of three grotesque dwarfs with hugely disproportioned heads.



PARTS OF MARBLE HORSES.

They show bronze technique and their resemblance to the horses of St. Mark's in Venice is interesting.

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They have castanets in their hands and perform a rollicking dance with contortions and grimaces to accompany their motions. The group displays a ribaldry and wantonness not usually portrayed in Greek statuary. One of the ship's lamps with its burnt wick still intact, exactly as it was when the ship foundered, is also here and helps to date the wreck. Two anchors of lead, each weighing close to a ton, complete the ship's equipment. Again, as at Anticythera, the bronze objects are the better preserved, some of them still retaining their ancient patina.

The date of this wreck is placed in the late second or early first century before the Christian era. The ship was probably on its way from the Piræus to Rome when it was driven south by the storm to which it finally succumbed. The cargo may have been the shipment of an Atticus or of some ancient Duveen. It may have formed part of the booty which the dictator Sulla sent to Rome. Or again it may have been the purchases of some Roman knight who, having found wealth in commerce, was carrying from the old world of Athens to the newer world of Rome the complete adornment of a villa; for some of the marbles, less damaged by their long sojourn in the ocean, look fresh-cut and unused.

These two wrecks are interesting as confirming what we already abun-

dantly knew, the great sea-borne traffic by which Greek art went out to beautify the Mediterranean world.

The waters of Italy,* too, have surrendered their treasures of ancient art. But the perennial enigma and the perennial lure are the two imperial barges—houseboats, perhaps we should call them—which are known to rest on the bottom of Lake Nemi. This lake

nestles one thousand feet up in the Alban Hills in the crater of an extinct volcano near the site of Alba Longa, from which Rome, according to tradition, drew her origin, not an hour's ride from the Campidoglio. Nemi is a beautiful lake and profoundly poetic: the inspiration and the despair of the many artists who attempt yearly to record its charm on canvas. The lofty banks give the waters a dark tinge and the wild country about adds an air of mystery. *L'occhio di cupo smeraldo*, "the eye of dark emerald", the Italians

call it. One feels that its depths hide secrets.

On the north shore Diana had her most famous temple and grove (*nemus*, from which the modern Nemi is derived) and the lake was known to the ancients as "Diana's Mirror" from the clear reflections on its surface. The worship of the goddess here was as strange and mysterious as the country in which the sacred enclosure stood.



BRONZE EROS FROM MAHDIA.

The gem of the collection: replica of a statue attributed by some to Praxiteles, by others to Lysippus or to his school.

* See *Notizie degli Scavi* for 1895 and 1896; C. Ricci, *Emporium*, 59, 373 ff.

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The *rex nemorensis*, the high priest of the goddess, must be a runaway slave, one who had come to the shrine and secured his pontificate by killing his predecessor in mortal combat—

*The priest who slew the slayer
And must himself be slain.*

A region of such enchantment as these Alban Hills became popular with the Romans of the late Republic and of the Empire as a site for magnificent villas. Here Cicero had a place of retirement, and Lucullus—famed alike for his cruelty and for his luxury—here sought refuge from the noise and heat of Rome. Here the Emperors built great establishments of rest and pleasure and, if we may believe the ancient chroniclers, of revelry as well. Suetonius connects Caligula with the lake in one of his unforgettable anecdotes of the mad Emperor. Thinking that the priest of Diana's shrine had held office long enough, he hired a great butcher of a slave to go and slaughter him.

On the surface of Nemi, then, some time between 37 and 41 A. D., Caligula launched the two great ships which now lie at the bottom. They are sunk near

the sacred enclosure of Diana, one fairly near the shore, the other farther out. The latter seems not so richly adorned and was perhaps auxiliary to the first. The existence of this second ship was not discovered till 1895, which explains why the references in what follows are to a single ship: investigation

has not yet seriously concerned itself with this later find.

Quite unlike the case with regard to the ships of Anticythera and Mahdia, a tradition of a vessel of fabulous magnificence sunk in Lake Nemi had persisted from imperial times and was never wholly forgotten. Peasants fished over the spot for centuries and no one knows what prizes have been secretly recovered and sold! The Renaissance, however, first conceived the idea of salvaging the barge entire.

In 1436 Cardinal Prospero Colonna, who owned Lake Nemi, called to his assistance Leon Battista Alberti, famous as a geometrician as well as an architect. Alberti built a monster raft supported on empty casks. He placed powerful windlasses aboard and summoned divers from Genoa to fasten grappling hooks to the hull of the submerged boat.



BRONZE HERM OF DIONYSUS POGON (DETAIL.)

A signed original of the sculptor, Boethus, which came from a shipwreck near Mahdia off the coast of Tunisia, Africa.



LAKE NEMI. VIEW OF THE LAKE AND OF THE SMALL TOWN OF NEMI. NEAR THE FAR SHORE IN THE LEFT
MIDDLE GROUND IS THE SITE OF THE WRECK OF THE TWO IMPERIAL BARGES.

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The performance was to be an impressive one. When the preparations were completed, the Cardinal invited all the great personages of the Papal City, clerical and lay, to watch the ship rise spectacularly from the water. In this august presence the supreme effort was made. The winches turned and the cables groaned, but the ship did not rise. All that was accomplished was to tear off part of the prow and sides of the vessel. Bits of wood, bronze and lead were brought to the surface. The systematic destruction of the ship had begun.

A century later, in 1535, Francesco de Marchi made the second important attempt. He availed himself of the invention of one Guglielmo di Loreno, which, to judge from the description, must have been a sort of diving-bell or diving-dress—perhaps the earliest use of this apparatus. In this de Marchi himself descended. He complains in his account that he could not remain down long and if he lost his footing he would be drowned by the water's entering the contraption. He declares that he saw rooms in the palace which he believed built on the deck of the boat, but neither he nor di Loreno dared enter on account of the risk of becoming entangled and drowning. This time, also, hawsers were attached and an attempt made to raise the ship. De Marchi succeeded in ripping off enough wood "to load two fine mules", a section of floor and various objects of bronze, adding to the damage done by Cardinal Colonna.

For three centuries the ship had rest from any systematic destruction. But the cupidity of the fishermen of Nemi had been aroused and they never ceased trying with hook, rope and grappling iron to strip from the buried mass some booty—a nail, a plate of bronze or

lead—for which they found a ready market. Then came a third major attempt made in 1827 by Annessio Fusconi. He, too, had a special diving-dress of his own invention, a raft of original construction, and novel and powerful hoisting machinery. He also succeeded in recovering some smaller objects and more fragments of wood. But his cables snapped at the weight of the wreck and as heavy rains cooled the waters of the lake operations had to be suspended. During this suspension robbers carried away everything, apparatus and all!

The last great violence was begun in 1895 with all the appliances of modern science, and when, strangely enough, the minister of public instruction was Guido Baccelli, a name famous for service to Roman archaeology. Eliseo Borghi concluded an agreement with the Orsini family, who had jurisdiction over that part of the lake, and secured the consent of the government to his attempt. He sent down divers in modern diving-suits who brought up the beautiful bronze objects which form so effective a display in the *Museo delle Terme* today. The work of destruction went on during the summer of 1895 until the united protest of intelligent people showed the government its error and the operations were stopped. From then till now the authorities have forbidden any further attempt to recover the ships or objects from them.

With this year of grace 1927, a year of intensified national feeling in Italy and consequently of heightened interest in archaeological research, the subject of salvaging the ships has come up anew. The government has decided to solve the problem of how to recover the imperial barges provided the cost is not prohibitive. A commission of investigation has been appointed and at

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LION'S HEAD OF BRONZE WITH MOORING RING IN ITS JOWL.

These bronzes were covers for upright posts or horizontal beam-ends.

least one definite principle has already been established: no program will be adopted which will in any way further endanger these precious documents of Roman civilization.

Suggestions have been invited from all sources, and France, Spain, Belgium and Holland have proposed schemes, in addition to the countless plans originating in Italy. These plans the commission is now engaged in sifting. They divide themselves roughly into two classes: (1) projects for raising the ships and (2) projects for lowering the surface of the lake. Those who favor the first method cite the raising of the *Leonardo da Vinci* and other imposing works of salvage which have been accomplished in the

case of monster vessels, especially since the war. They forget that the broad ways of ocean afford an easier access for powerful machinery than the road over the crater edge of a mountain. Furthermore, the barges lie on a slant toward the center of the lake, and hence have become filled with mud and roots. Their timbers have rotted from the action of the water and it seems well-nigh impossible to raise them without rending them to pieces. The lake-floor, furthermore, is covered with a deep stratum of slimy mud above which floats suspended a film of gossamer-like particles which on the diver's slightest move rise in clouds and obscure objects even close at hand.

So the commission at present inclines to the second means, the draining, total or partial, of the lake and the removing of the ships as if they were stranded in a meadow. In this way not only the ships would be recovered but also the myriads of small objects which have fallen from them or which have been torn off by their tormentors. When the commission has studied the suggested plans through experts it will be possible to see whether the cost of execution will be prohibitive.

An archaeologist immediately thinks of the functioning of the ancient *emissarium* of Nemi. But this has been found impossible due to the damaged condition of the Roman outlet. The Alban Lake, however, still has its Roman emissary functioning perfectly today, though built at least as early as 397 B. C. As this lake is eighty-five feet lower it may be possible, by transferring the waters of Nemi to it, to use this ancient wonder of Roman engineering for restoring to the modern world Roman imperial barges. One must, however, leave ways and means for the present to the study of the commission.



BRONZE DECORATIONS FOR BEAM-ENDS. A GORGONEION, OR MEDUSA-HEAD, OF HELLENISTIC TECHNIQUE AND TWO WOLF-HEADS, REMARKABLE AS BEING CLOSELY SIMILAR AND YET MODELED SEPARATELY.

Meanwhile one may speculate as to the nature of the ship which has been up to the present the object of study. Till 1895 it was called the barge of Tiberius, but in that year the recovery of inscribed lead pipe points conclusively to Caligula. Suetonius tells the story of Caligula's extravagances with great gusto: he invented new types of baths, and banquets with bizarre foods; he drank pearls of great price dissolved in vinegar; he laid out villas with entire contempt of cost, desiring nothing so much as to do that which men declared impossible; he built Liburnian galleys with ten banks of oars, their sterns set with precious stones, with sails of varied hue, with great bathing establishments on them and

with porticoes and banquet halls. In these, says Suetonius, he was accustomed to coast along the shores of Campania. It has been suggested that Suetonius has suffered some confusion and that his description is rather that of the ships of Nemi. The theory is at least plausible.

What was the nature of the imperial vessel? The Italian naval engineer, Malfatti, who interrogated the divers of 1895 on behalf of the ministry of public instruction, is convinced that the vessel was a real ship with rudder and oars and capable of navigation. Others are disinclined to believe this and hold, with the earlier investigator, de Marchi, that it was rather a great float with elaborate superstructures, a



THE BRONZE WOLF-HEADS ARE AMONG THE FINEST EXAMPLES WE HAVE OF PURELY DECORATIVE BRONZES DATING FROM CLASSICAL TIMES. EACH HEAD CLEARLY SHOWS INDIVIDUAL TRAITS.

palace, gardens, chapels, adorned with marbles, bronzes, precious stones and all the luxuries which the mad emperor knew so well how to employ. For similar floating villas Dr. Corrado Ricci, chairman of the investigating commission, cites the ships of Hiero II, tyrant of Syracuse, of Cleopatra, of Borso d' Este on the Po, of Ludovico Gonzaga on the Mincio and the Signoria of Venice on the Grand Canal. The answer to the questions awaits the report of the commission and the funds necessary to carry out the accepted plan.

The objects which have already come to light give indication of the significant facts on Roman life and art which we may expect from complete recovery of the vessels. There are some bronze pieces in the Vatican collections and a ship's beam in the *Museo Kircheriano*;

and one shudders at the thought of how many treasures may have been secretly dispersed. But the most important known recoveries are those now on view in the *Museo delle Terme* in Rome, brought to the surface early in the effort of 1895.

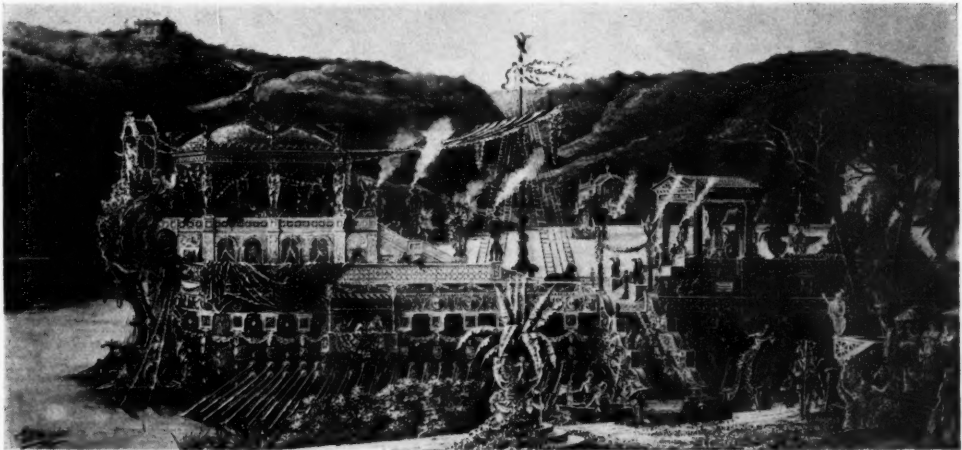
Among them are huge beams, bronze nails, lead pipes to convey water, bits of mosaic and sections of a marble floor. The objects of greatest artistic value, however, are three bronze lion-heads, two wolf-heads and one Gorgoneion or Medusa-head, which acted as ornamental end-covers of upright posts or horizontal beams. From the second ship comes a bronze cover of a beam-end portraying in relief a forearm and hand, perhaps as a charm against bad fortune and the evil eye. In the jowls of the lions and wolves are mooring rings, evidently never or little

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used. The two wolf-heads, one of the lion-heads especially, and the Gorgoneion show a modelling which is firm and sure. The Medusa-head is of Hellenistic type and all are of the technique of the first half of the first century A. D. The two wolf-heads are particularly noteworthy for this: they are twin pieces, yet each shows variants, a fact which proves that they were modeled separately and were not merely mechanical reproductions of one original, as would be the case in the decorative art of today. These four

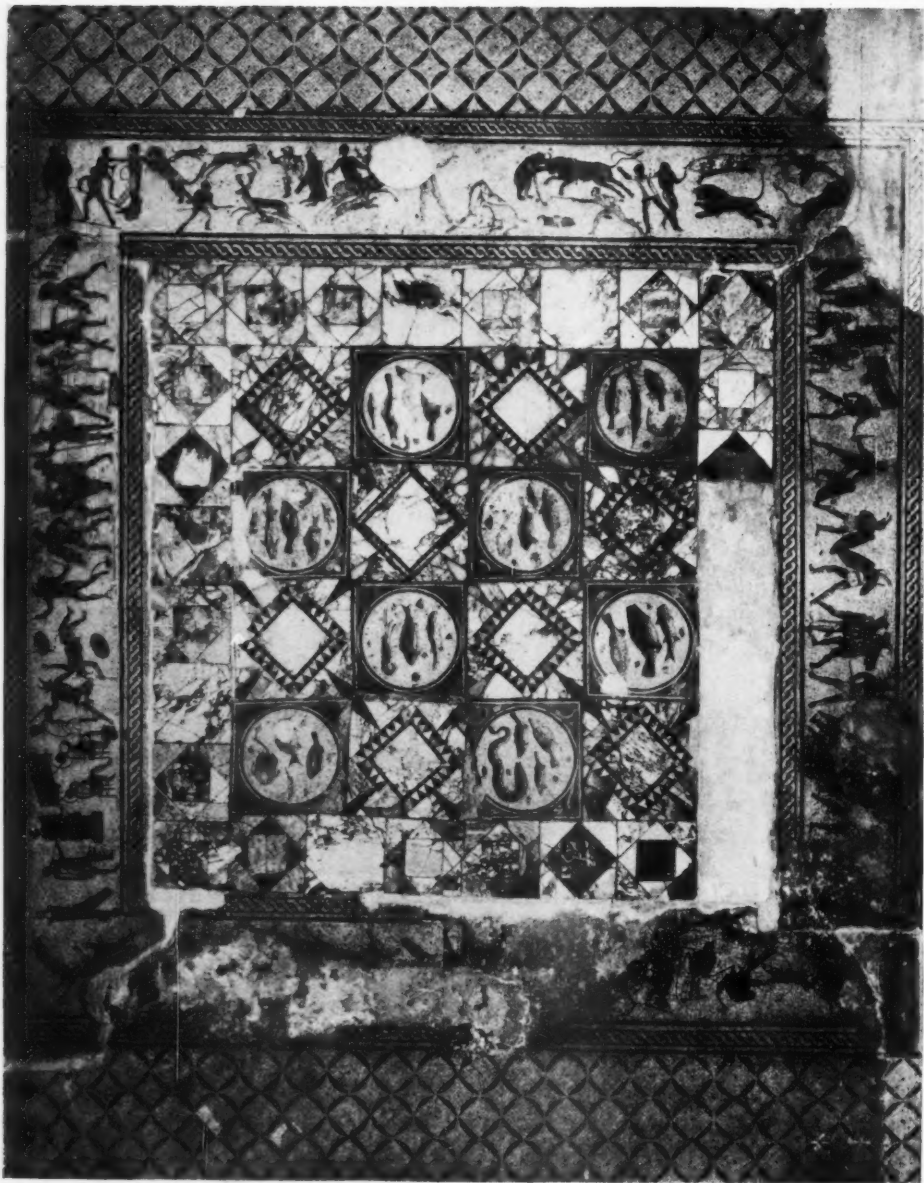
are among the best examples of *purely decorative* bronzes that have been preserved to us from all antiquity.

From the sea, then, have come three great treasure-stores of art and ancient life which the water of centuries had covered and now reveals. The discovery of isolated statues goes on apace. A promising vista opens before us. With the perfecting of mechanical devices which daily defy the elements more and more, what may we not expect of artistic value or of historical fact from this new type of archaeological research?



THE ROYAL BARGE AS CONCEIVED BY THE ITALIAN ARTIST MANCINI. SOME BELIEVE IT A REAL SHIP WITH OARS AND A RUDDER, OTHER PICTURE IT AS A LARGE FLOAT.





MOSAIC WITH SCENES FROM AN AMPHITHEATRE. FROM THE ROMAN VILLA AT
ZLITEN, TRIPOLITANIA.



COMBATS BETWEEN GLADIATORS, NORTHERN SIDE OF THE MOSAIC.

IN A ROMAN VILLA AT ZLITEN

By SALVATORE AURIGEMMA

EARLY in 1913, soon after the country around Zliten, in Tripolitania, had been occupied by the Italians, the chance discovery of an antique vase, six coins and a few pieces of furniture in the locality of Dar Buc Ammera (a distance of about three kilometers west of the actual modest anchorage or *Marsa* of Zliten), attracted the attention of Colonel Petitti di Roreto, then commander of the 50th Infantry Regiment stationed in that region.

Excavations were undertaken which were at first entrusted to the soldiers, but in 1914, a systematic campaign was started with a staff employed for regular archaeological research in the colony. Surprising results were obtained.

A corridor, or what might formerly have been a porch, entirely paved in mosaics was brought to light. It ex-

tended for a length of over forty-seven meters along the northern side of the edifice. A large hall entirely decorated with a geometrical design of mosaics was then revealed, and at the side of some smaller rooms a hall was excavated and thoroughly cleaned up. It had a large mosaic pavement representing the various seasons, some fishes and also small compositions of Egyptian subjects. Finally a mosaic decorated with scenes from an amphitheatre and several other mosaics were discovered. One—a perfect gem of the art—displayed small ornamental animal scenes.

The most important of these mosaics for vivid reproduction of Roman life and customs is the one revealing scenes from the amphitheatre. Scenes of contests and fighting between gladiators, scenes of torture, scenes of hunt-



ORCHESTRA ON THE NORTHERN SIDE OF THE MOSAIC.

ing wild animals. This mosaic is framed in a border of inlaid work in a geometrical pattern. It measures 3.51 m. square and unfolds its decorations along a quadrangle, representing in a dramatic manner a variety of situations, with a number of personages and animals cleverly grouped and powerfully designed. Some are engaged in fierce battle, others are being torn and devoured by wild beasts, and still others are hunting them. This mosaic quadrangle encloses a central piece formed of sixteen sections, eight of inlaid marble and eight being small pictures of fish in mosaics. They are admirable for their delicacy of touch and design and for their exquisite execution, as well as for brilliant coloring.

It is therefore spontaneous to admire the whole of this artistic central mosaic, it so vividly describes the pomp and recurring emotions of the scenes in the amphitheatre.

During the Roman period, two kinds of games or spectacles were held in the amphitheatre. The *venatio* came during the morning. These were conflicts with wild beasts or singular and especially cruel tortures inflicted upon criminals. In the afternoon the *munus* proper, or more important games and contests of gladiators, took place.

These mosaics of Zliten show combats with wild beasts, and more than one scene of *damnatio ad bestias* appears on the eastern and western sides of the hall, whereas the gladiatorial combats

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are revealed on the northern and southern part. The gladiatorial episodes thus revealed are the most brilliant and perfect examples of the kind to reach us from antiquity. The armor and gala ornaments appear with a delicacy of touch and a precision of detail difficult to find in other similar monuments. The variety, animation and vivacity of the scenes give us a vision of living reality.

The spectacle is presided over by a god, whose bust is placed upon a high plinth. From his wide countenance and blond beard he would seem to be a Hercules.

An orchestra is further depicted, composed of a player of the tuba, a woman at an organ and two horn-players. These personages are only a part of the more important group of musicians who performed at these spectacles or *munus*, so that an air of gaiety should surround scenes of such tragic cruelty and bloodshed. Beyond this orchestra, the struggles of the

gladiators appear, represented in furious and deadly assaults, full of ever-changing excitement, of pauses fraught with anxiety, of despairing appeals for salvation to the magistrate, at whose expense the *munus* was being celebrated.

Toward the northern side, we first witness the duelling of two Samnites, attired in tunics of vivacious coloring and ornament and wearing plumed helmets. The right arm is protected by the *manica* (long sleeves) and the legs and feet encased in *embades* (a sort of boot). In the heat of battle, the two Samnites have cast off the bronze *clipei* (shields) of oval shape, and one of them, having vanquished his opponent, is in the act of giving him a mortal blow, whilst he, feeling life to be in danger and renouncing further battle, raises his hand to the *editor* of the *munus* in an appeal for mercy. From this moment he becomes sacred. A master-at-arms or *lanista* hastens to grasp the victor's arm, and turns his



COMBATS BETWEEN GLADIATORS, SOUTHERN SIDE OF THE MOSAIC.



THRACIAN GLADIATOR, OPLOMACHUS AND MASTER-AT-ARMS, NORTHERN SIDE OF THE MOSAIC.

face, full of anxiety, towards the *editor* until the magistrate, by a sign, gives his verdict.

Towards the epilogue is also a combat between a *retiarius* (a gladiator armed with net and trident) and a *secutor* (a gladiator armed with sword and shield who always fought a *retiarius*). The *retiarius*, who is not shown with the characteristic net, has already lost his *fuscina* (trident) and, hard pressed by the adversary, has been wounded in the left leg, from which a large flow of dark blood escapes. His weakness is evident, and he lifts the index of the right hand to implore for mercy, for the *missio*, that is, for the right to withdraw alive from the duel.

In the encounter, full of action and fervor, between a Thracian and an

oplomachus (an expert fencer or swordsman), the Thracian gladiator wears an imposing curved helmet with two curling plumes and wields the curved sword or *sica*, used by his countrymen. He wears fringed leggings and has the shins protected by armor. He turns to parry the thrust which the *oplomachus* is trying to inflict from over the small rectangular shield or *parma* which he bears. The *oplomachus* is attired in the same manner as the *secutor* in the previous scene.

Another combat, also between a Thracian gladiator and an *oplomachus*, is not so uncertain. Here the Thracian is the victor. His adversary, wounded in the face, lifts the index of the left hand to appeal to the magistrate for his life. A master-at-arms, dressed in the

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usual civilian costume, has hastened up, placing between the two foes his wooden staff, which is the insignia of his charge. Will the judge be merciful and grant this life? The master-at-arms and various other personages of this interrupted conflict look up to him in mute appeal. The fine, robust figure of the Thracian gladiator—perhaps the most compelling personality in the mosaic—stands out in vivid relief in this really beautiful scene. The gladiator, accustomed to victory, is a powerful personality in his assured pose. His haughty, almost contemptuous, but perfectly tranquil attitude is not less effective and dramatic than the violent action and mortal anguish depicted in the following scenes.

The last combat on the northern zone of the mosaic is of singular interest. It takes place between two



SECUTOR ON THE NORTHERN ZONE OF THE MOSAIC, WITH HELMET RECALLING THE HEADDRESS WORN BY AMERICAN INDIANS.



COMBAT BETWEEN GLADIATORS, PROBABLY MURMIL-LONES, ON THE SOUTHERN SIDE OF THE MOSAIC.

secutores, each protected by a wide rectangular shield, and the left shin by an exceedingly high *ocrea* (metal greave). They wear large golden helmets, with tall crests of feathers down the centre, recalling the decorations and headdress worn by American Indians. In the furious encounter, the gladiator on the right is about to hurl himself upon his adversary to wound him. The latter, standing on the defensive, waits to strike his enemy on the bare chest.

On the southern side other scenes of violent conflict appear in rapid succession, revealing furious assaults, apprehensive retreats and anxious appeals to the magistrate directing the games, surrounded by the flash of weapons and the brilliant coloring of the costumes. One of these conflicts,



THE DAMNATIO AD BESTIAS, OR CONDEMNATION TO THE WILD ANIMALS, ON THE EASTERN
SIDE OF THE MOSAIC.

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from an archaeological point of view, is of exceptional interest. It takes place between two gladiators, probably *murmillones* (gladiators usually matched with Thracians or *retiarii*). They wear rather unusual helmets, one oval, the other bell-shaped, and they bear two curious shields markedly curved and with the right and left edges running up like an arch or circle. These, and other details of attire incline to the belief that these gladiators are *murmillones*, of whose armor we still know relatively little. All the gladiators in the other scenes belong to the better known classes already described. Each scene is represented with so efficient a descriptive quality and in so unique a manner, that the artist has never fallen into the error of stereotyped repetition. Every episode shows us his wonderful talent for expressing a constant variety of form, an action—or a moment—which seems worthy of being seized and rendered imperishable.

Even more important than the gladiatorial combats are those parts of the composition on the eastern and western sides of the hall. Here are depicted hunting scenes and scenes of torture. The first one in the northeast angle represents an episode of *damnatio ad bestias*. A black cart is shown in the extreme corner of this mosaic, and the structure of the cart is that of a Greco-Roman chariot with two wheels. A stake or cart-pole is fixed vertically in the centre of the cart and two oblique pieces of wood unite this to the shaft of the chariot. A gigantic barbarian, entirely nude, with the exception of a small *subligaculum* (loin-cloth) stands erect on the cart, hands bound behind his back. An African panther is hurled upon him and tears his shoulders. Blood flows abundantly on the arena. One of the *bestiarii* (fighters of wild

animals) to whom is confided the dangerous task of inciting the wild beasts, of preparing certain machines to facilitate the devouring and tearing to pieces of the victims—so that death should appear in all its attractive horror to the public—is pressing the shaft with his foot, so that the infuriated panther should not overthrow both man and chariot. Meanwhile he grasps the shaft of a second chariot, upon which another barbarian, also nude, is bound facing a second huge panther. This beast is being instigated to fury by another *bestiarius*, and is in the act of attacking and wounding the bare chest of his prey with the claws of its enormous paws. This scene is superbly expressive, and is full of dramatic power. The same impression is conveyed by a repetition farther along. Here a *bestiarius* of fierce countenance cracks a whip with his right hand and holds by the hair a nude victim, who retreats terrorized before a ferocious lion, which is in the act of hurling itself on the poor wretch, its mane erect, its jaws wide. In another scene, we behold the body of a dead man.

All these people exposed naked to the wild beasts are depicted in a singular manner. The bodies are reproduced in mosaics of a yellow-brown tint, whilst the *bestiarii* and gladiators have their skins painted a rosy brown. They, therefore, evidently belong to an African race of the Mediterranean, which is bronze in color and which we can reasonably believe to be the Garamante race.

The scenes of torture are succeeded by those of the *venationes*. A deer is on the point of being killed by a young and beardless hunter armed with a *venabulum* (hunting-spear). An antelope is also being chased by a hound, and

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a hart with immense, twisted horns, is already in the clutches of a hound, whilst a hunter, armed with a large knife, grasps the animal by the antlers. A grey wild ass, wounded by a hunter, attempts to rise and to tear from its side the javelin which has wounded it.

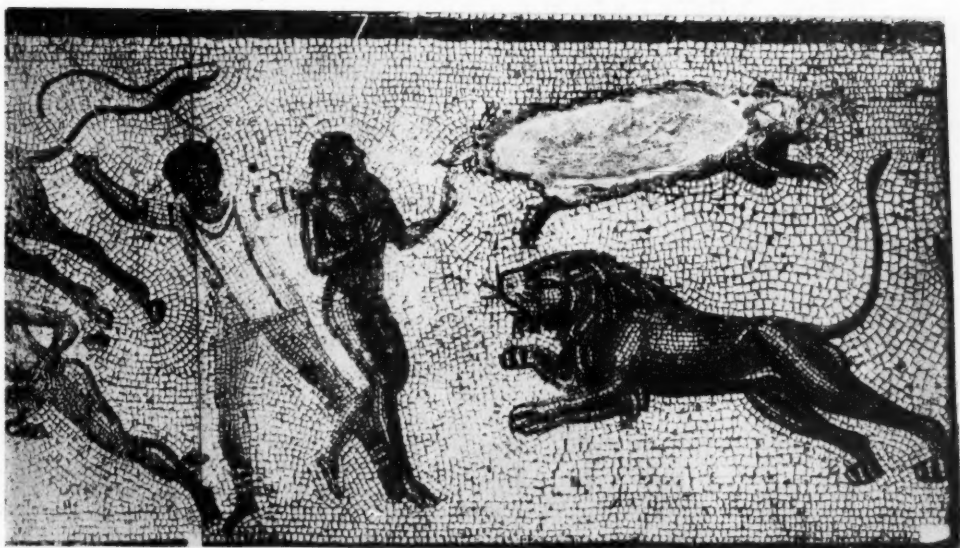
Other strange scenes are mingled with those of the *venationes*. In one of these we see a bearded personage, not armed, short and square of figure, with thick arms and legs, his head covered by a *galerus* (skull cap), in the act of extracting apples from the *sinus* (folds) of his tunic, to throw them to a huge and very dark wild boar. This beast stands on its hind legs and has another apple resting on the ridge of its snout. This scene evidently represents an episode of the games with tamed animals which constantly took place in the amphitheatre. It must have been taken from life, as the comical ugliness of the dwarf and the ungainly movements of the boar are so expressive and realistic.

Another scene is entirely different, although not less effective. A dark brown bear is represented as standing on its hind quarters, chained to a fawn-colored bull. The impossibility of the two beasts to wrench themselves asunder from the chain which binds them has brought them to such a paroxysm of fury that before freedom is gained one of them will surely be killed. Meanwhile there cautiously advances a young Garamante with a curved stick, with the evident intention of unbinding the chain to give them their liberty.

Other scenes of torture and of hunting are revealed on the western side, but these only give a very vague idea, owing to a large crack in the mosaic, which has almost entirely destroyed the picture. Two episodes alone are visible,

though not clear. One of them expresses an ostrich hunt and should be noted. Here an ostrich, escaping towards the right followed by a hound, has opened its wings to facilitate flight. The other ostrich, having been attacked, has become violent and is about to rush upon the hunter and strike him with a long claw. The hunter, on his guard, parries the blow and severs the bird's head. From the wounded neck a large flow of red blood escapes.

The technical delicacy of execution of the work (the mosaics of the gladiatorial combats and those of the *venationes* number eighteen inlaid pieces per square centimeter), and the tasteful and sober blending of inlaid work and *opus vermiculatum* indicate it dates as far back as the first century of the Empire. An understanding of archaeological dates would induce to this belief; also the fashion in which the organ-player has dressed her hair, and the *barbulae* (small beards) and the *lacernae* (mantles, cloaks) of several of the personages. A historical fact, however, gives greater probability to this opinion. On the eastern and western sides of the mosaic, all the persons undergoing torture are barbarians of yellow-brown tinted skin, probably Garamantes. As in the scenes of the *damnatio ad bestias* in the amphitheatre, all the persons depicted are malefactors, it would seem strange that in the mosaics immortalized at Zliten so many Garamantes should be at the disposal of the magistrates celebrating the *munus*, were there for this not a special reason. Evidently they are prisoners of war, and this also harmonizes with the information Tacitus gives us of a terrible invasion of Garamantis, in the region of Leptis, near Zliten, in the year 70 after Christ.



ANOTHER DAMNATIO AD BESTIAS, ON THE EASTERN OF THE MOSAIC.

Valerius Festus commanded the African legion in that year, and the inhabitants of Oea had appealed to the Garamantes to assist them in reprisal against the inhabitants of Leptis. As a consequence the Garamantes swept down upon the country surrounding Leptis, driving all before them, and the terrorized inhabitants barred themselves within the city walls. The troops of Valerius Festus brilliantly vanquished the Garamantes, thus saving the inhabitants of Leptis. Since the Garamantes had acted as bandits, a punishment of the most severe kind was inflicted upon them before the public of the amphitheatre, so that they should expiate the terror and danger which they had caused at Leptis.

We do not know who owned the villa at Zliten. But the beauty of the mosaics points to a personage of taste, and the costliness of the work indicates his great wealth. Was he of Italian or of African race? As yet, we cannot tell this.

The mosaics are for beauty and for perfection of execution and composition one of the most valuable creations of the art. The richness of coloring and the experience shown seem equally admirable. The artist gives singular care and relief to every part of the decoration, and each mosaic is consequently a gem of festive tints and precision. It is one of the most perfect treasures of its kind to reach us from antiquity, extraordinary and vivid in its expression of life.

Our spirits are touched, and even now, after the lapse of centuries, we are possessed by the same emotion as the artist. Our souls remain impressed by the dramatic scenes, yet to these feelings is added a sense of joy at the gay and brilliant spectacles, which are rendered in the only art which could express such vivacity, such luminous beauty in so imposing a manner,—the art of mosaics.

THE ARCHAEOLOGIST IN THE FIELD

By WILLIAM RANSTED BERRY

THE popular conception of an archaeologist is a doddering old man in blue spectacles with a yard long beard.

Like many other popular conceptions, this is a mistake. If one could make a flying inspection of the various archaeological excavations in Egypt, Northern Africa, Greece, or Asia Minor, one would find on the spot in nearly every case energetic young men in knickerbockers or riding breeches who would talk to you about inter-collegiate football or Minoan clay figurines with equal enthusiasm.

Another mistaken idea is that the field archaeologist, armed with a pick and a shovel and a couple of dry biscuits, wanders off alone into some desert place and there proceeds with monumental patience to dig up acres of ground until he happens to find something.

As a matter of fact, the archaeologist himself never digs—unless it is a question of freeing from the earth with his own hands and a knife some particularly precious and fragile find. He is busy, on the contrary, and usually behind-hand with such humdrum occupations as note-taking, measuring, photographing, in the intervals he is able to snatch from the task of superintending a crew of native laborers. Nor is the scene of his activities ever chosen

haphazard. Some indication there must be either on the surface or in the configuration of the ground to suggest what is hidden below. The upper portions of two huge marble columns rising from the centre of a wheat field indicated the site, forty feet below, of the great Temple of Artemis at Sardis in Asia Minor; before now the finding of a single

potsherd has led to the discovery of a buried city or the tomb of a once-powerful King.

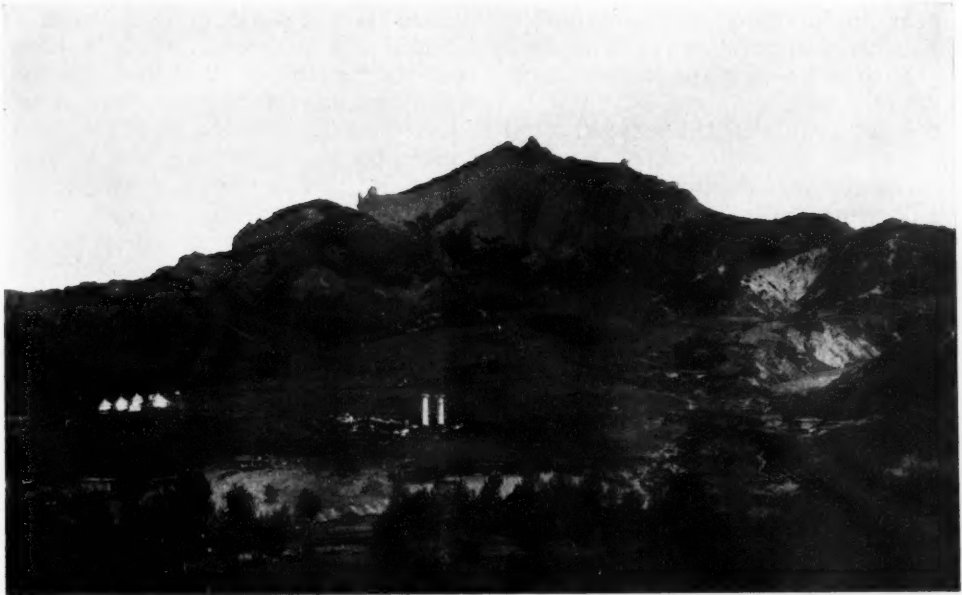
The archaeologist in the field cannot be a dreary pedant immersed only in the dry bones of his subject. To be successful he must have boundless energy, imagination, the gift of inspiring zeal in others, and

lastly, but by no means least, the ability to handle men. Digging expeditions have been wrecked, archaeologists murdered, because of the lack of a little human understanding—a little diplomacy.

All knowledge is of value to the digging archaeologist. I would even go so far as to say that a smattering of engineering, draughtsmanship, carpentry, mining, chemistry, accounting, languages, geology, mineralogy, biology, medicine and surgery, even a vague notion of the principles of obstetrics in an emergency, is of greater assistance in the field than all the years which may have been spent in



A FIELD DAY FOR THE WORKMEN WITHIN THE EXCAVATIONS.



ACROPOLIS OF SARDIS SHOWING THE EXCAVATIONS OF THE BURIED TEMPLE IN THE MIDDLE DISTANCE AND THE BED OF THE RIVER PACTOLUS IN THE FOREGROUND.

the study of books and the contents of museums. It is not intended to infer that an intensive understanding of the science of archaeology is unnecessary; it is, of course, the foundation of any archaeologist's equipment. But it is suggested that such an understanding is brought into full play only when the results of the day's work come to be examined and classified, or when the season's campaign is over and the arduous work of cataloguing, reconstruction, scholarly speculation, begins.

On one occasion in Turkey a rising on the part of the Mohammedan workmen against their foreman, a Christian, from the islands, synchronized with the destruction in a great wind of the wooden shack in which the excavators lived. It is scarcely necessary to point out that no information to be found between the covers of archaeological textbooks was of any help in preventing a general massacre or in rebuilding

the expedition house before nightfall.

Again, it may become suddenly necessary to shift a marble block weighing many tons in order to release a workman pinned beneath it; the man himself will require surgical attention. The walls or roof of a tomb hollowed out inside a hill will show signs of falling in; they must be shored up—and in no inexpert fashion—if the lives of the men at work within the tomb-chamber are to be safeguarded. Less vital questions, but questions of major importance archaeologically, constantly crop up. What acids and in what proportions to use in cleaning some corroded bit of delicate metal-work or jewelry; how to account for the presence of an unexpected mineral in a particular locality; why the original occupiers of the site under investigation elected to build their city where they did rather than across the river where at first glance the conformation of the terrain would

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appear to be much more favorable. The answers to questions such as these are not to be found in the classics nor in museum catalogues.

Digging is full of romance; it could not well be otherwise where men unearth on the spot the history, art, even the domestic details of peoples more remote than the average mind can easily comprehend. Here comes to light in a temple excavation a long and intricate legal document, a mortgage; Greek lettering of the best period exquisitely cut upon the marble wall. There a pick dislodges one of several great boulders sealing the entrance to a Lydian tomb; the first man in stands in the presence of dead who were laid away hundreds of years before the rude hordes of Cyrus brought low the city above their heads. The bodies are dust now, but round about still stand the vases and the toilet articles once used in life, and mixed with the particles of bone on the earthen couches lie rings where once the hands were folded upon breasts, or golden chaplets where the heads reposed. In Egypt where, due to the preservative qualities of the dry atmosphere, the passage of a thousand years is but as yesterday in so far as decay or even tarnish are concerned, such a tomb scene is even more impressive. But perhaps not. Perhaps the very perfection of the preservation robs the contents of the Egyptian tomb of that romantic assurance of antiquity which is best imparted by a little corrosion, a few remaining flakes of color, sometimes a mere film of vestments which vanishes at a breath.

Digging can be affecting too. In the course of clearing what is left of the Temple of Artemis at Sardis it became evident that when with the passage of time the temple fell into the hands of the Romans and eventually was abandoned as the precepts of Christianity

ousted the old pagan gods, it began to be used as a quarry to furnish building material for Roman structures. Everywhere masses of marble chips were found showing how the great blocks of the temple walls and the column drums, and quite possibly the gigantic statue of the goddess herself, had been ruthlessly destroyed to furnish lime for Roman brick-work. Fortunately, in the interests of archaeology, this vandalism was brought to a sudden end by an earthquake which split in two the nearby acropolis hill in such a fashion that what remained of the temple was buried to a depth of forty feet under an avalanche of earth and rubble. As modern excavators labored to bring the temple once more to light they came upon an enormous marble block tilted against the first course of one of the temple walls. One end of the block rested upon the ground and under it, pinned down by it really, lay the fragments of a human skeleton, the ribs smashed to powder under the weight of that great stone. Among the bones were found a few trifling copper coins in the remains of a small sack of coarse leather such as a poor slave might have had about him. It was not difficult to picture the tragedy which had been enacted there more than eighteen hundred years before: the gang of slaves sweating under the fierce Asiatic sun to lever that huge block from the wall beneath a rain of blows from the Roman overseer's whip. One man leaps down to adjust a roller, or perhaps to ply his crowbar more conveniently from below. Unexpectedly the block slips, plunges down. There is a yell of warning, but it comes too late; the man is crushed to the ground under half a ton of solid marble. He is only a slave, so let him lie. The shrewd whip whistles through the air, and the gang moves on to the next block.

Another incident, less moving, might



EAST END OF THE TEMPLE OF ARTEMIS, SHOWING THE EXCAVATING IN PROGRESS.

be reconstructed from a find made in the *dromos*, or entrance-passage of a hillside-tomb on the same site. A hoard of gold *staters*—the first coins struck by Croesus, perhaps the first gold coins ever minted—was discovered in a common earthen pot hidden away in a cranny of the *dromos* wall. How came it there? The coins could have no connection with the dead within the tomb, for the tomb-chamber had not been rifled and it was, besides, a century or more older than the coins. Nor was it likely that a relative of the deceased, however eccentric, had made the shades of his ancestors a surreptitious offering of a sum worthy in those days of a king's ransom. Then it was remembered that the coins roughly agreed in date with a recorded sack and burning of the city by a

hostile army in 546 B. C. What more likely, then, than a flight from his threatened house of some panic-stricken merchant, a miser maybe, clutching to his breast as he ran the golden savings of a lifetime? By a miracle he escaped slaughter in the streets and made his way out of the city through one of a hundred breaches in the city wall. But everywhere, even here in the suburbs, swarmed the enemy—plundering, firing, killing. Where could he hope to find a hiding place, not so much for himself as for that gold he carried which was more precious to him than life itself? His eyes lighted upon a remote ravine, the flanks of which were lined with a long array of elaborate tomb-entrances. If only he could reach it! He would be safe there among the dead from an

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enemy too intent upon the living. By good luck he reached the ravine unobserved, and dodged into the first tomb-entrance that promised concealment. There he lay panting and shivering hour after hour, listening to the sounds of distant fighting, the screams, the crash of falling roofs. The sun set and darkness fell. He prepared to flee once more, hoping to win to the mountains before morning. But what were those sounds close by? An accidental ring of metal against stone and exclamations in a foreign tongue—a party of the enemy searching for fugitives, or bent on tomb-robbing. In frantic haste he thrust the pot containing his gold *staters* into the cranny he had previously noticed in the wall beside him, cowered down and held his breath. Nearer they came, and nearer. Suddenly they entered where he was and one stumbled against his prostrate body. In an instant he was struggling in the hands of barbarous, black-bearded Persians. The ravine echoed to his sheep-like bleatings. But it was quickly over, his body rolling down the hillside streaming blood from a dozen spear thrusts—and his gold settled down in its dark refuge not to reflect the sun again until it was disturbed by the pick of a peaceful Turkish workman after twenty centuries and more.

Important single finds are exceptions and not the rule during a season's digging. For one day when a hoard of gold is found, or a statue, or a fine inscription, there are many days when the combined efforts of as many as three hundred laborers produce nothing more interesting than ever-growing piles of potsherds, indeterminable bits of bronze, fragments of worked stone or marble of small individual importance. On the other hand, it is upon these little things, the mass of insignificant detail accumulated bit by bit in the day's round, and not upon the

sensational discovery which, more often than not, is a purely lucky strike, that the happy issue of the campaign depends. The sum of countless small indications might well eventually point to some new fact, or to the refutation of some established theory, which would be of greater importance, archaeologically speaking, than the discovery of a second Venus de Milo.

Disappointments are many and sometimes hard to bear. Especially is this true in tomb digging when, after weeks of heavy toil on the part of the workmen and a corresponding decrease in the all too slender expedition funds, the chamber proves to be empty, thanks to the attentions of early tomb-robbers. To refer once more to Sardis, the expedition leaders there had high hopes of finding, beneath the basis upon which the colossal statue of Artemis had stood within the temple, votive offerings in gold and silver such as were found in a precisely similar position at Ephesus not far away. A few silver coins, it is true, were found in the crevices between the foundation blocks, doubtless lodged there by chance, but no votive offerings of any description were brought to light, even though every stone in the basis was moved and a shaft sunk to the actual hardpan.

Not least among the rewards which fall to the lot of the archaeologist in the field is his increased knowledge of countries and the manners of men. He penetrates into districts unknown to the casual visitor; he learns to know strange peoples, to speak their languages and, if he have in him that human sympathy and understanding without which no leader can perform his full duty towards those under him, he is privileged to share lives and confidences of which the memory will remain fresh with him long after the catalogued records of his work are thick with dust.

VISBY: CAPITAL OF THE BALTIC CRETE

By JOHN NIHLÉN

THE lovely island of Gothland in the Baltic is, without doubt, one of the most interesting centers of ancient culture in northern Europe. On account of its beauty and its delightful climate, it has been called the Crete or Sicily of the Baltic, and thousands of people from all parts of the world visit it every year. Not only its scenic beauty, however, has given Gothland its fame, but also — perhaps even more — its history, the most brilliant events of which occurred at Visby, the idyllic city of ruins and roses, which is now its capital. During a great part of the Middle Ages, this city was one of the most prominent centers of trade and culture of northern Europe, being a member of the Hanseatic League.

The history of Gothland can be traced back to a period of the Stone Age at least 7000 years ago. About 1000 years after that time there were already several important centers of habitation along the coast, and towards the end of the Stone Age (about 2500 B. C.) there were hunting and fishing communities, some of which had grown to considerable size and to a compara-

tively high degree of culture. The level of the land having slowly but steadily risen, these habitations are now found 30 to 50 feet above the present shore-line.

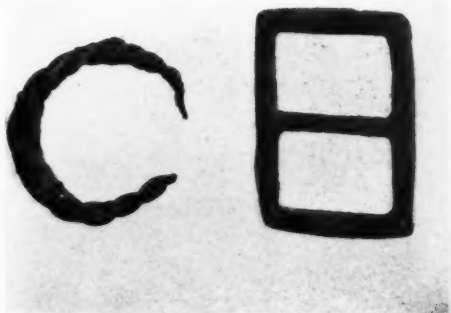
Beautiful objects from the Bronze Age (1800 to 600 B. C.), found all over the island, show that the inhabited area had gradually extended since the time of the Stone Age. But it was not until the final period of prehistoric times in the North — the Iron Age (600 B. C. to 1050 A. D.) — that the culture of Gothland attained a position really dominating the neighboring regions. As early as the first four centuries after Christ, corresponding to the Roman Iron Age, the island was as densely populated as it is today. This is shown by the remnants of a



THE FLOWER IMBEDDED GATE OF AN OLD CHURCH-YARD ON THE BALTIC ISLAND OF GOTHLAND.

great number of buildings, graves and roads dating from that time. The contact between the island and the surrounding countries was then quite lively and increased still more during the following period, the epoch of migrations (400 to 800 A. D.). Probably owing to over-population there was a large emigration to Russia,

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A BUCKLE OF BRONZE AND A FINGER-RING OF SILVER FROM THE DEPOSITS UNDER THE MARKET PLACE.

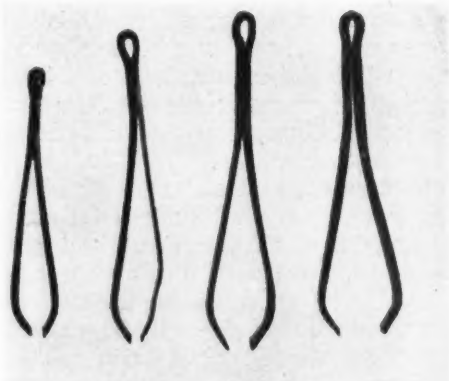
while many went south to take part in the large popular movements and wars on the continent.

The far-reaching and important commercial and cultural connections which were to play such a great part in the development of Gothland during the Viking Age (800 to 1050 A. D.) had thus been well prepared during the preceding eras. The great activity and freedom of movement characterizing the trade of Gothland during this time was remarkable. Almost every yeoman farmer was a wealthy merchant, sailing his own ships, and the peasants of this small island thus broke their isolation and got into contact with the outside world, with its great market places where the highways of international trade met, and with cities which were centers of old cultures. They established trading factories at Novgorod in Russia and further east on the Volga, where they exchanged goods with Arabian merchants. Commerce with England and Friesland also flourished, and more than 20,000 Arabian and Anglo-Saxon coins have been found in the soil of Gothland. As an illustration of the far-reaching connections of the island, it may be mentioned that a cup originating in China and a sea-

shell from the Indian Ocean have been found there in Iron Age graves.

During the Viking Age, Visby was only a small port, a trading-place among many others. According to the old *Gutasaga*, which was written in the XIIIth century, the name of Visby was originally Vi, which probably means sanctuary or place of sacrifice. Perhaps Visby, in these early days before Christianity had reached the northern countries, had already attained an important position as a religious center. The *Gutasaga* relates that one of the first Christian churches on the island was built at Vi in spite of violent opposition on the part of the believers in the ancient faith. Even the name of the architect has been preserved to posterity: Botair of Akebeck.

Most of the other trading places on the island gradually lost their importance, while that of Visby steadily grew. In the XIIth century a large number of German merchants settled there, and from that time onward the city became the most important center of trade in the entire Baltic. The power of the city rapidly increased.



BRONZE PINCERS FROM THE VIKING AGE FOUND UNDER THE MARKET SQUARE AT VISBY.



RUINS OF MEDIAEVAL FORTIFICATIONS OF VISBY, THE CITY OF "RUINS AND ROSES" IN GOTHLAND.

The Germans allied themselves with the native population, fortified the city by a large encircling wall, which is still preserved almost intact, and contributed to the construction of a large number of magnificent churches and secular buildings, many of which dominate the town today.

These are, in short, the facts about the province of Gothland that can be extracted from old documents and from the sagas. But as a result of archaeological excavations during the last few years, our knowledge of the ancient history of the city has been greatly extended. The most illustrative of the excavations are those that were carried

on in the years 1924 to 1926 in the large square in the center of the city, where untouched cultural deposits to a depth of ten feet were worked through. By carefully examining the position and the contents of the finds in the different strata, it has been possible to get a vivid picture of the history of the place. The deepest beds were found to date from a period probably more than 4000 years ago. They contained, besides different sorts of arms and implements of stone, a large quantity of cleverly made fishing-tackle of bone and horn. There were also found about ten primitive graves where the dead had been buried with their arms, im-

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plements and ornaments. In some cases the habit of mutilating the corpses could be traced. Often the dead had been covered with a layer of red paint which is still preserved.

The Stone Age deposits appeared to extend for about 2.7 acres under the central parts of the present city. Thus Visby can claim traditions of more than 4000 years, having had as its predecessor during the Stone Age this probably densely populated fishing-place where cattle-breeding, as well as hunting and fishing, were practised, as proved by bones found in the excavated strata.

The deposits accumulated over the remnants of the Stone Age habitations were from a much later period, the Viking Age; i. e., from the IXth and Xth centuries A. D. Occasional finds,

however, witness the fact that the spot had been inhabited during the long intervening period, though to a smaller extent.

The fact that Visby became a trading center during the Viking Age is clearly shown by numerous deposits and finds in the soil. An extensive bed of logs, probably the remnants of a yard laid out on the very swampy ground, a twisted finger ring of silver, a chape to a sword and some smaller implements of bronze, fragments of pottery and other things have been found here. The deposits from the great days of Visby in the XIIth-XIVth centuries were, of course, even more important. A great number of stone pavements, deeply worn on the upper side, proved the place to have been for a long time the scene of heavy traffic. In one spot

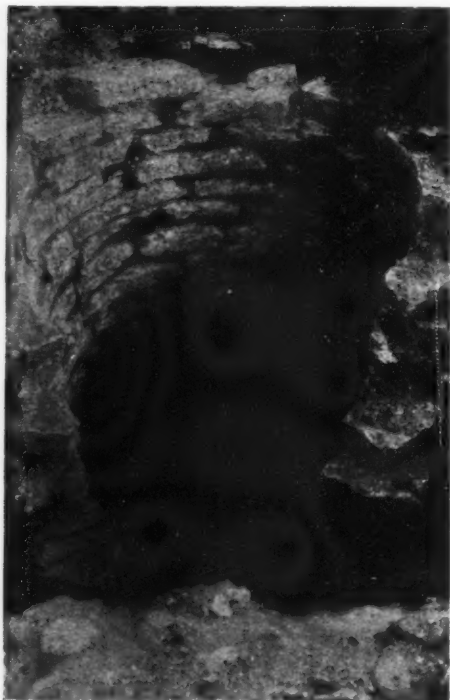


STAIRCASE LEADING TO THE TOWN HALL.

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were found thousands of objects of bone and horn, most of which were more or less ornamented. Probably this was the site of some mediaeval comb-maker's shop of considerable importance. Horns of moose and to some extent of reindeer had been freely used, and as neither of these animals was ever found in Gothland, the horns must have been imported.

The most interesting of the recent excavations are those that have disclosed the foundations of the mediaeval city hall, situated on the large square we have just mentioned. Remnants of walls have now been completely excavated, disclosing the lower parts of a building of considerable size, about seventy-five feet long by sixty-five feet



MEDIAEVAL WELL IN FRONT OF THE TOWN HALL.



A 4,000 YEAR OLD SKELETON FOUND IN THE STONE AGE DEPOSITS UNDER THE MARKET PLACE AT VISBY. THE OBJECTS IN FRONT OF THE HEAD ARE A HARPOON OF HORN, A PAIR OF WILD BOAR TUSKS, SOME PEARLS OF BONE, AND FRAGMENTS OF A STONE AXE.

wide. The building was a type very unusual in Scandinavia. The ground floor consisted of a single large hall, to which altogether fourteen broad stairways gave access from the surrounding squares and streets. In front of the house was a broad passage, paved with large flat slabs and probably opening through some sort of a loggia towards the square outside. A wall running right through the length of the building was found to originate from a later period, probably from the XVIth or XVIIth century, when the place was used as a wine-cellar. In the walls were two mighty cisterns, one of which was a large, barrel-formed

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COLUMNS FROM THE "CALF-SKIN" HOUSE, NOW USED TO SUPPORT A BALCONY IN A FARMER'S HOUSE OUTSIDE OF VISBY.

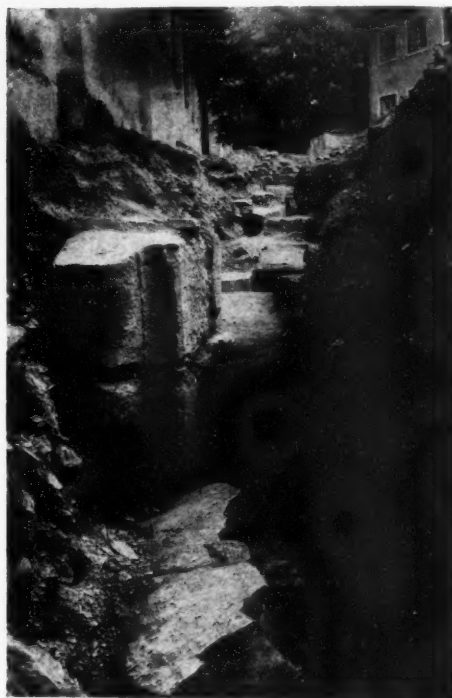
room underneath the ground floor, from which the water was brought up by means of a kind of dumb-waiter arrangement.

This city hall of Visby, probably dating from the XIVth century, must have strikingly resembled some of the city halls of Germany: for example, that of Dortmund. On the ground floor there was often a large market-hall where the merchants of the city offered their goods for sale. The afflux to this much frequented hall must have been very large, necessitating a great number of stairs from the surrounding streets. On the next floor the Council held its sessions. Here,

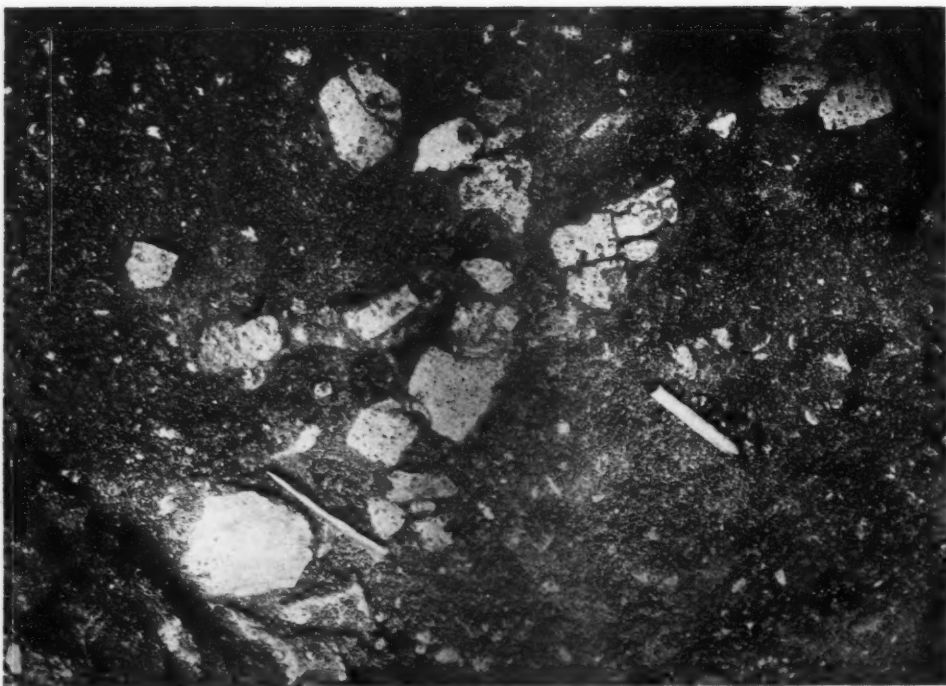
too, were held the main festivities of the city.

The solid, carefully made foundations of the hall, penetrating to bed-rock, were made of limestone blocks taken from an old pit on the island. A large number of street pavement-slabs were marked by the symbols of the mediæval stone-cutters. It is not known certainly what the structure was like, for by the beginning of the XVIth century it was much damaged by fire. Being restored, it again went into decay toward the end of the XVIIth century. Later on the ruins were used as building materials for new houses.

Last year another Middle Ages foundation, situated not far from the old



FRAGMENT OF A PORCH FROM THE "CALF-SKIN" HOUSE.



STONE AGE CERAMICS FOUND IN THE DEPOSITS UNDER THE MARKET PLACE AT VISBY.

port, was excavated. This is the legendary "calf-skin" house, the commanding structure and beautiful decorations of which were glorified in several of the mediæval chronicles. Like the city hall, this building was early destroyed, the remaining traces of the cellar were covered by soil and deposits of a later age, and the old house quite forgotten. The excavations had to be restricted because a garden and a modern house are situated over the ruins. It was, however, possible to uncover enough of them to make possible a reconstruction of the ground floor. This edifice had been even larger and more magnificent than the city hall, measuring 138 feet in length by 75 feet in width, and the massive

limestone walls were nearly seven feet thick. Curiously enough, this house was of the same type as the city hall. Through a remarkable coincidence these two representatives of a style practically unknown in the Scandinavian countries were both destroyed and buried in the soil.

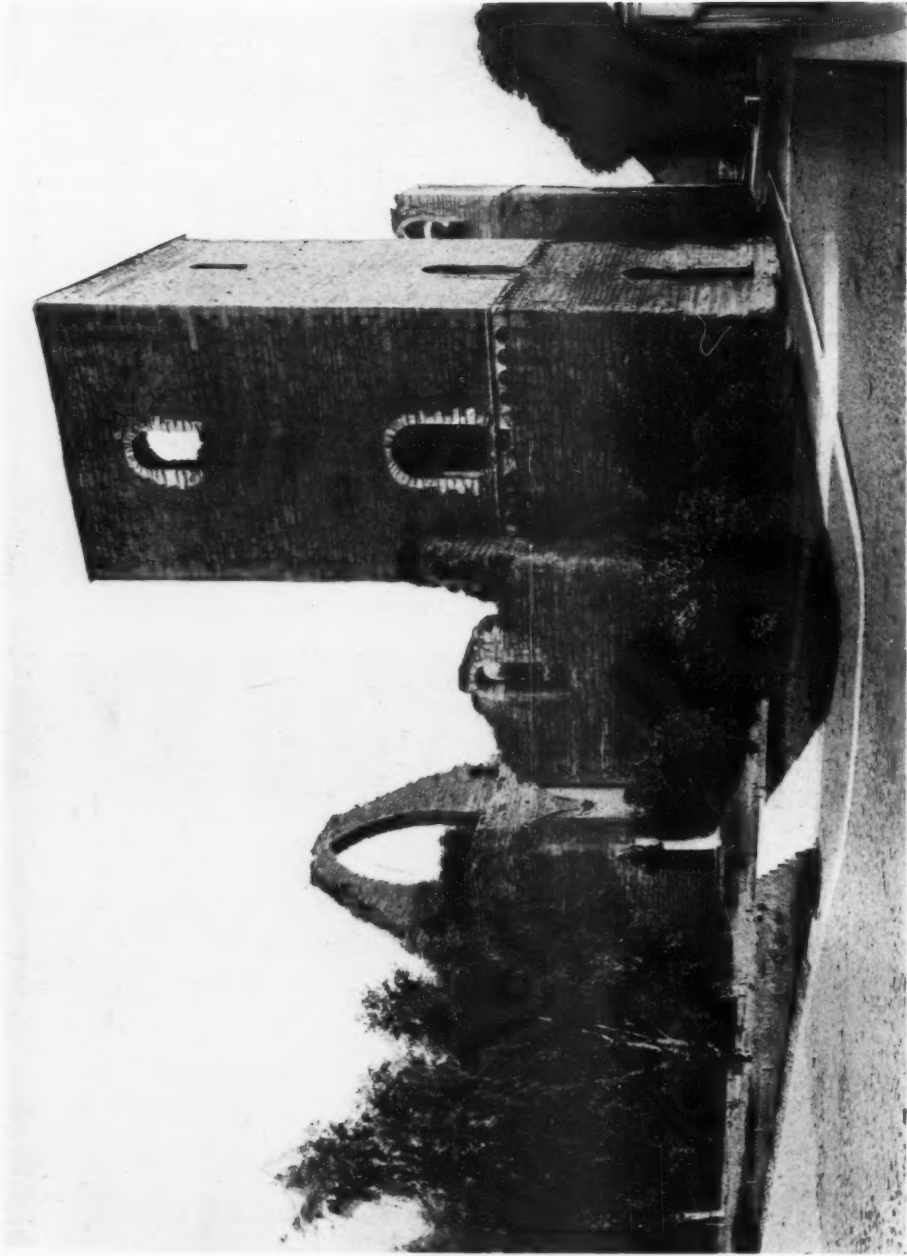
The famous "calf-skin" house, the curious and interesting history of which testifies to its great importance during the Middle Ages, was probably the citadel of the Swedish King in Visby. The size of the building is evidence of the power acquired by these kings during the XIIIth and the XIVth centuries over the formerly practically independent city of Visby. The saga says that King Birger Magnusson of



EXCAVATED RUINS OF THE "CALF-SKIN" HOUSE.



PARTS OF THE WEST SIDE WALLS OF THE "CALF-SKIN" HOUSE.



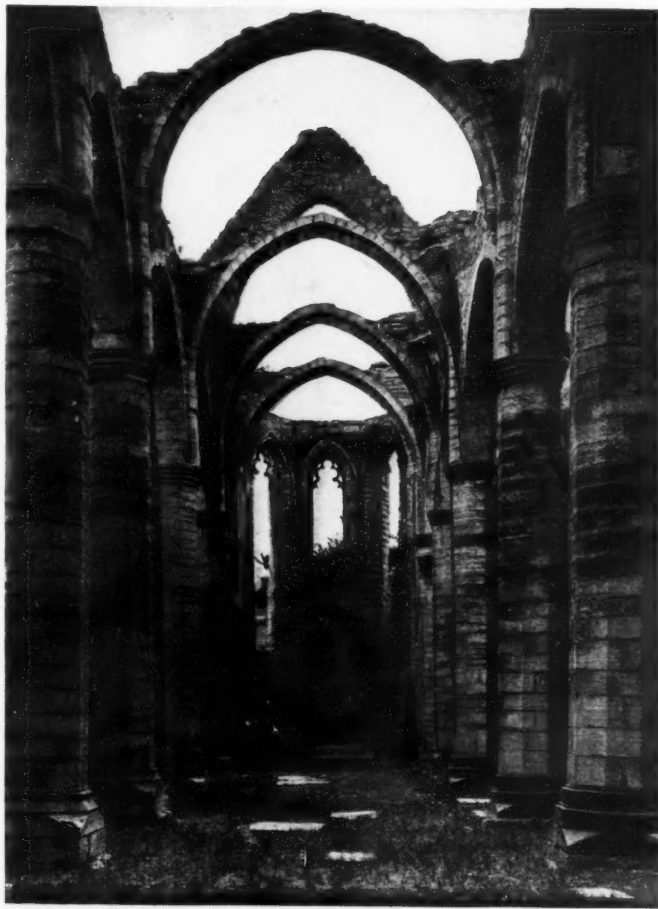
THE RUINED CHURCH OF ST. DROTEN.

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Sweden, who in the beginning of the XIVth century visited the island in order to collect new taxes from the burghers of Visby, asked for as much ground as he could cover with a calf's skin. Such an apparently reasonable demand the burghers would not reject. Then the King, the saga says, had a calf's skin cut into narrow strips and encircled a considerable part of the old fishery near the port. On this plot the great "calf-skin" house was then built.

The saga may be true or not. In any case the excavations show that the house was erected early in the XIVth century, and many circumstances designate it as one of the king's citadels of commerce. Even in this house the ground floor consisted of a single large hall. It had three naves and twenty-four bays whose arches were supported by slender, finely carved columns several of which have been found in the neighborhood. Leading to the hall were twelve staircases, six on each side. The façade evidently faced towards the west, i. e., towards the port and the sea. Here the stairs faced the gateways which opened out into the street. Each porch was covered by a pointed arch, either of simple design or with a

rich Gothic profile. After the end of the Middle Ages, the building was used as a storehouse, but was left to fall into pitiful decay and during the XVIIIth century was totally ruined.



THE INTERIOR OF ST. CATHERINE'S CHURCH SUGGESTS THE SPLENDOR OF BY-GONE DAYS.

Recently excavations have also been started on the site of the giant double church of St. Peter and St. Hans. The larger of these two conjoining churches—St. Hans—had five naves and must have been an enormous

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structure. The excavations, which are not yet completed, seem to show that the style of the church, which was probably built in the XIIIth century, was influenced by Westphalian and perhaps by French architecture.

Finally excavations have been made in the northern parts of the town, where important remains of extensive iron-works have been found. Close studies afford evidence that probably at the beginning of the Middle Ages—but possibly as early as toward the end of the Viking Age—this was a center for the smelting and refining of iron and copper. No traditions have been preserved from this important industry, which seems to have been carried on for a considerable time, but which later fell into oblivion. Only the

name of the street where it was located, *Smedjegatan* or the

Smiths Street, contains a memory of the time when iron was worked on a large scale in these outskirts.

The discoveries of ore and of fabricated iron indicate that the ore was imported from Utö Island near Stockholm, and certain circumstances seem to show that the people of Gothland during this period exported wrought-iron to neighboring countries.

It therefore seems quite probable that



THE ST. MARIA CHURCH, NOW THE CATHEDRAL OF VISBY, HAS BEEN KEPT IN REPAIR FOR SEVEN CENTURIES AMONG THE RUINS OF OTHER CHURCHES.

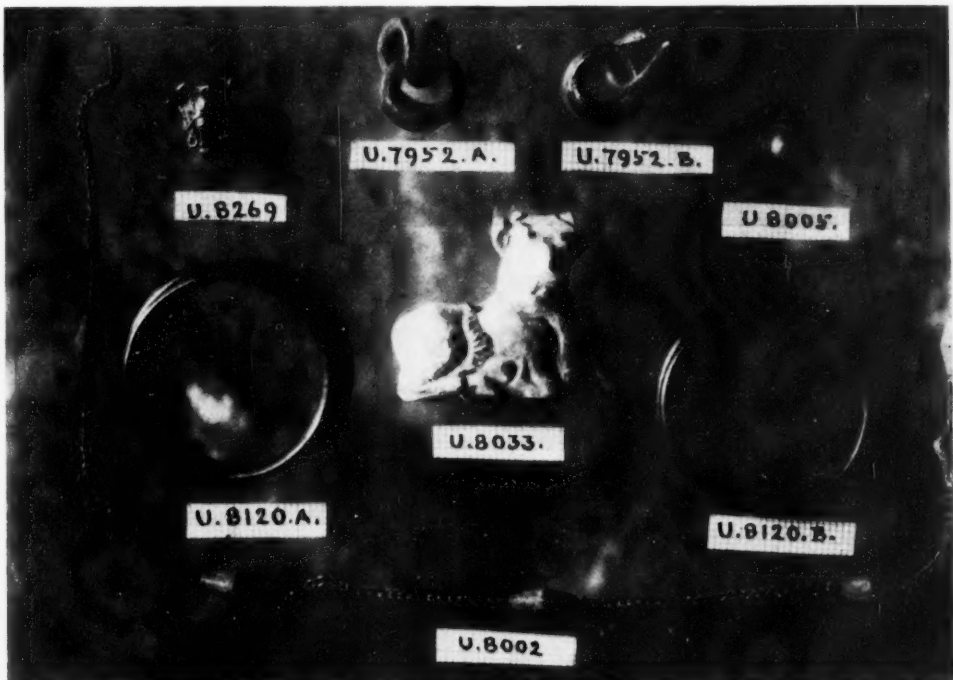
the great power of Visby in the beginning of the Middle Ages to some extent was based upon this iron industry, the location of which is now revealed for the first time. As the existence of this trade has hitherto been quite unknown, the results of the recent excavations go far to elucidate the history of old Visby, and to explain the dominant position held by this city during the Middle Ages.

NOTES AND COMMENTS

THIS WINTER'S DISCOVERIES AT UR

During the two months of December and January just past, the Joint Expedition of the British Museum and the University of Pennsylvania which is conducting excavations on the site of Ur of the Chaldees under the leadership of Dr. Leonard Woolley, made important discoveries and carried back into a much more remote past

firms the view that this was itself the main temple of the Moon God. Interesting from more than topographical reasons was the excavation of a large building standing over a mile outside the limits of the Sacred Area, a great hall—it might have been a royal audience-chamber—put up by king Sin-idinnam shortly before 2000 B. C. The remarkable feature about it was that it has undoubtedly had an arched and vaulted roof, and

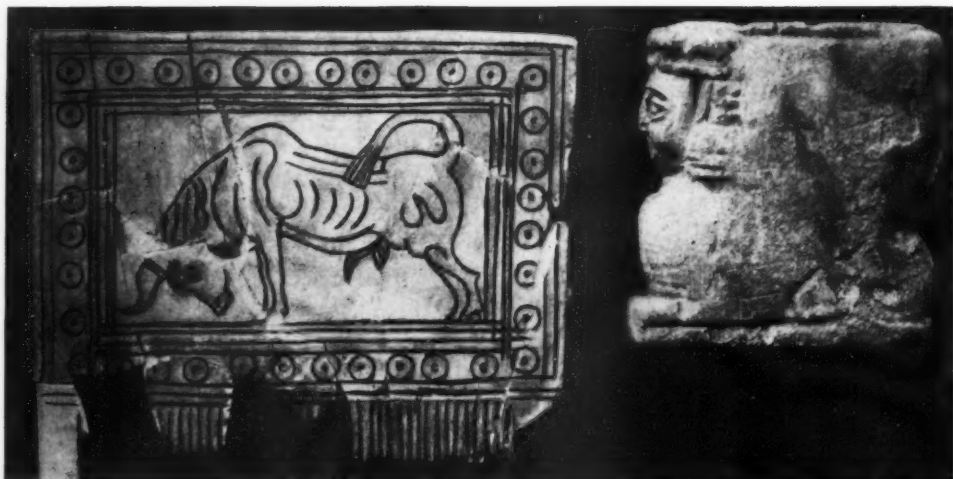


ORNAMENTS OF GOLD, SHELL AND SEMI-PRECIOUS STONES FOUND BY DR. WOOLLEY IN THE TOMBS AT UR. THE CHAIN IS OF GOLD AND LAPIS LAZULI, AND THE BULL IS OF SHELL. ALL THE TRINKETS DATE FROM ABOUT 3500-3000 B. C.

than was hitherto understood, our knowledge of Chaldean civilization. The two reports which follow state in Dr. Woolley's own words exactly what he has done. The December statement covers two separate excavations, one of which filled up a big gap in the ground-plan of the early Temenos by proving the existence of a large building of the Larsa period (circ. 2100 B. C.) between the old royal palace and the temple of the Moon Goddess, while the other settled the character of the buildings surrounding the Ziggurat terrace from the times of Ur-Engur (2300 B. C.) until those of Nebuchadnezzar. To Nebuchadnezzar's Temenos an entirely new aspect was given by the discovery of a great entrance gateway at a point where in 1922-3 we had failed to trace the line of his enclosing wall; it not only completes the Temenos plan, but throws into true perspective the great courtyard and practically con-

until recently this would have been judged wholly impossible at such an early date. But the finding of arched doorways in private houses of the same period, and the fact that contemporary brick tombs were sometimes barrel-vaulted, justifies a restoration of this building which upsets all the views that have been held about the history of architecture in the East.

When in 1922-3 I excavated E-Nun-Makh, the joint temple of the god and goddess of the Moon, work in the sanctuary itself was carried down only as far as the well-preserved brick pavements of Nebuchadnezzar. Now I decided to pull these up to test the lower and earlier levels. Almost at once a discovery was made which added a new chapter to a temple history already sufficiently long and varied. Below the floors we found in position no less than four diorite door-sockets bearing the inscriptions of Marduk-



IVORY COMB AND PAINT-POT, DATING FROM ABOUT 1000 B. C., FOUND AT UR OF THE CHALDEES BY THE JOINT EXPEDITION OF THE MUSEUM OF THE UNIVERSITY OF PENNSYLVANIA AND THE BRITISH MUSEUM.

nadin-ahi, king of Babylon from 1117-1100 B. C., recording his restoration of the shrine. No monument of this king had previously been found at Ur. So far as we know no Babylonian king for three hundred years had paid any attention to the city's buildings. It is not too fanciful to assume that Marduk-nadin-ahi's activities had a political motive, and that he was making a bid for popularity in the South with a view to his wars with Assyria—wars which were to lead in the end to his own overthrow and to the capture of Babylon by the northern enemy. Under the same pavement were other remarkable objects. The first was an ivory casket-lid bearing an inscription in Phœnician—the first Phœnician inscription, I believe, found in Mesopotamia; it is a dedication by a lady to Astarte, perhaps here identified with Nin-Gal the Moon Goddess. The second find was a complete toilet set in ivory: lotus-shaped mirror-handle, powder-box, paint-pot in the form of a sphinx, and, the best piece of all, a fine-toothed comb bearing on either side a picture of a bull, exquisitely engraved in the finest Phœnician style. It was a set of which any lady might have been proud.

But the success of the month's work has depended ultimately on the tombs, at least if success be reckoned by objects rather than by plans and details of history. Inside the southeast end of the later Temenos we have come upon a cemetery dating to a very early period—just after 3000 B. C.—which has yielded, besides much information about the primitive customs of the people, a wealth of fine objects of all sorts and of all materials. The most surprising feature is the abundance of precious metal. Diadems, rings, ear-rings and beads of gold and silver are the rule rather than the exception; long pins have heads of lapis lazuli mounted in silver or gold; copper is seldom used except for utilitarian purposes for cups and vases, weapons and tools, of which indeed we have a satiety. Individual objects are remarkable; there is a gold chain set with lapis which might have been made yesterday instead of five thousand years ago; there is a little gold bull beneath whose chin is tied a great false beard, the symbol of godhead, making of the domestic animal the "great Bull of Heaven"; a bead shaped as a pear on which is perched a bird, not a

quarter of an inch high, yet with all its feathers faithfully rendered; a tall head-ornament of silver in the shape of a lotus flower, the petals ending in balls of lapis lazuli capped with gold; a diadem of thin gold on which are rows of figures, their outlines impressed in the soft metal, huntsmen and stags, bulls and rams, a magnificent example of the work of the primitive goldsmith. And there are mere curiosities such as a gold bead three and a half inches long set between two equally large beads of lapis which must have been a burden to their wearer. Curious, too, is a large shell which, by the addition of a stone head, is transformed into a duck, the bright colors of the breast reproduced by an incrustation in lapis and mother-of-pearl, while a similar incrustation adorns a half of an ostrich-shell used as a cup.

We have dug a hundred and eighty graves, and there should be twice as many more yet to dig.

Dr. Woolley's second report carries on the fascinating tale in January.

It is now possible to say definitely that the period covered by the main cemetery lies between 3500 and 3200 B. C. In other words, we have gone back behind the First Dynasty of Ur, whose historical existence was first proved by the discoveries made by this expedition three years ago, and are in that nebulous epoch assigned by ancient Sumerian chronologers to a dynasty of kings of Erech who reigned for periods that make Methusaleh look young. That Ur was already then a royal—though not an imperial—city is shown by the names of kings engraved on their cylinder seals; that the country, divided up as it must have been into a number of city-states, had already achieved a high level of culture and enjoyed a certain uniformity of civilization, is made clear by the character of the objects found in the graves and by the analogies they present to the contents of more or less contemporary tombs excavated by Mr. Mackay at Kish, a hundred and fifty miles north. Indeed, the state of civilization illustrated by our discoveries is astonishing and, though it does not settle the question, throws new light upon the old dispute as to whether the civilization of the Euphrates or the Nile Valley can claim priority in time. Our cemetery

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belongs to the period when Menes was establishing the First Dynasty of Egypt, and already here writing is no less advanced than on the Nile, while the technique of the arts and crafts is definitely superior. The unification of Egypt in about 3400 B. C. is marked by the appearance of new art-forms and methods which seem to have been introduced from abroad or at least modified by foreign influences; the contemporary civilization of Mesopotamia is no less evidently the outcome of steady development in the country itself, and since change was demonstrably slow the origins of that civilization must go back to an immemorial antiquity.

The graves themselves are simple enough. In most cases the body, fully dressed, was wrapped in matting and laid on a mat spread over the bottom of the tomb shaft; personal belongings, jewelry, etc., were placed with the body, and between the hands or against the mouth was set a cup of clay or copper which presumably contained drink, just as a cup of water is often set over a modern Arab grave so that the dead man may wet his tongue before replying to the cross-examination of the recording angel. Against the roll of matting were placed other clay or metal vases containing food and drink, more matting might be spread over the top of these, and then the earth was flung back into the pit. In some cases a fire was lighted against the head of the dead man, and body and offerings were partly consumed before the grave was filled in; but the custom, clearly a survival of cremation, was already dying out, and in the later graves we find little or no trace of fire. In the higher levels a square wickerwork basket or coffin is sometimes substituted for the simple matting of an earlier age, and wooden coffins have been found, though these seem to mark a distinction in wealth rather than in date. But throughout the whole period we find, side by side with the inhumation burials, bath-shaped clay coffins whose furniture, though generally poorer in quality, is uniform with that of the matting tombs. It is tempting to assume that here we have evidence of the mixture of races, Sumerian and Semitic, which throughout the historical period characterizes the Euphrates Valley. In many of the graves the head is found to be resting on a pile of clean sand. The modern Arab of southern Mesopotamia has no such practice, but in northern Syria whenever a man is buried a basketful of clean sand is spread beneath his head, and the parallel may well be one argument more for an early cultural connection between Sumeria and the North.

The most remarkable object found during the month is only a fragment, the lower part of a square limestone plaque meant to be hung against a wall. It was found just outside the ruins of a building contemporary with the later graves. Carved on it in very fine relief, as sharp today as when it was cut, is a scene perhaps of some religious ceremony, but one is tempted to think it rather the funeral procession of an ancient king. It shows a chariot drawn by four lions; one man walks ahead as if to guide the animals, another walking behind holds the reins: the chariot itself is empty, but a leopard's skin is flung over it and to the front are tied the two spears, the quiver of arrows and the battle-axe which may be the dead king's armory. It is the earliest piece of stone sculpture that we possess from this country, and primitive though it be, it shows no lack of skill on the artist's part. A little panther's head carved in shell with inlaid eyes and lolling red tongue recalls the great copper lion heads discovered by Dr. Hall at al Ubaid, though those are of a later date. Finished technique of another sort is manifested by delicate work in gold and silver, filigree or cloisonné

pendants set with lapis lazuli and carnelian, intricately made gold chains and, perhaps most of all, by an imitation—a headband which has all the appearance of a chain but is really made with four strands of twisted wire soldered together side by side and so has the rigidity, suited to its purpose, which a genuine link-made chain would lack. The wealth of gold is surprising; not only beads and diadems are of the precious metal, but also long pins and such things as toilet-tweezers, stilettos, and even a tiny medical spoon. Of engraved seals we are getting a fine collection, and on them, too, the carving is often admirable. Silver vessels, lamps and bowls, are found, and copper vessels with a wide range of shapes are very common. Generally these are plain, but some examples are fluted after the fashion of Greek work of the fifth century B. C. It is hardly an exaggeration to say that the further back in time our excavations carry us in Mesopotamia the higher is the civilization they illustrate. Now in the middle of the fourth millennium before Christ we find work which the age of Nebuchadnezzar—halfway between that day and ours—could not surpass, and the crude beginnings of culture and art are still very far to seek.

C. LEONARD WOOLLEY.

Three important Roman monuments, The Castle of Pilate, the Arch of Bara and "Scipio's" Tower, all in the province of Tarragona, have been taken over as State property by the Spanish Government. The Castle of Pilate is really a massive tower at the southeastern angle of the city wall of Tarragona. Constructed of megalithic blocks, it has defied alterations and several wars, and still presents some of its ancient features. The Arch of Bara bestrides the Roman road which runs northward from Cartagena to the Pyrenees. It resembles the Arch of Titus in Rome, stands 40 feet high, 39 feet wide and is 8 feet thick. Considered the finest Roman arch in Spain, it is to be kept in repair by the Government. Its inscription states that it was built by Trajan's General Licinius Sura. The Tower of Scipio, not far from the Arch and about three miles northwest of Tarragona, is an ancient stronghold decorated with two statues locally declared to be those of the Roman leaders who commenced the peninsular conquest.

A "golden calf" which was part of a royal tomb treasure found in the Holy Land was recently exhibited in Chicago by Professor Breasted, with several other objects from the same sepulchre. The calf is a statuette about a foot and a half high overlaid with pure sheet gold, badly crumbled for the most part, but with the golden hoofs still intact. Prof. Breasted believes the tombs of the Hebrew kings, never discovered, will yield much material of importance in the history of Palestine. The present discoveries are from the first such burial place to be found, and are supposed to antedate the time of Moses by some five hundred years.

There were apparently no chiropodists in ancient Greece, and people then were troubled with their feet and improper foot-gear exactly as we of today are. Study of some of the most noted of Greek classic sculptures discloses that beginning with the latter part of the Vth century B. C., and extending on into our era, the realism of the Greeks reproduced foot deformities, thus clearly showing that the foot was compressed to such an extent that the little toe in most instances was bent under or crushed into the fourth. This is true even of Praxiteles' great *Hermes*.

GLOSSARY

(Continued from last issue. For explanations, see issue of June, 1926.)

A

ankh, u'za, senb: (Life, Health, Strength) the Egyptian formula, corresponding most nearly to the Latin *vital rex*, with which most Egypt. royal documents ended.

ankh'am: in Eg. mythol., a sacred flower; probably the lotos.

Ankh-ha'sen-a'men: the wife of Tutankhamen.

Ankh-ta': the sacred quarter of the city of Memphis.

an'lace: (now in little use) a short, wide, double-edged dagger or sword worn at the belt.

An'mautf: in Eg. hist., a high title of priestly rank, the symbols of which were the long lock of hair peculiar to the child Horus, and a panther-skin; associated with the cult of the ithyphallic deity Khem. (The meaning of the term seems uncertain; it may be "Husband-of-his-Mother").

An'na-nim: the Anu of Eg. history; the earliest settlers in the Nile valley.

An'nap: the Turanian term for the abstract idea of God. (Tur., *an* = star.)

An'na Pe-ren'na: in Ro. mythol., a goddess of spring; her festival occurred annually March 15. (Not the same as Dido's sister Anna, with whom in ancient times she was frequently confused.)

An'nar: in Norse mythol., husband of Night and father of the Earth (Jord).

An-no'na: (1) in Ro. anc. hist., the year's produce of a farm; general provisions; (2) a military tax paid in produce, for the subsistence of the army.

An-no'na: in Ro. mythol., a female deity of agricultural abundance, whose emblems were the cornucopia and ears of grain.

an'no ur'bis con'di-tæ: (Lat.) "in the year the city was founded" = Rome = B. C. 753.

An'um: in Celt. mythol., a revolving fortress-island, the place of departed spirits; the bubbling pot of the poet's inspiration brought from it magically by King Arthur.

a-nom'a-ceph'a-lous: in anthropol., having a malformed head.

An-nun-na'ci: the chthonic or earth gods of the Assyrians, resident in the lower regions.

An'ru: (1) the Eg. name of the great necropolis or public cemetery outside Memphis; (2) one of the names used by the Egyptians for their Elysian Fields (From the Book of the Dead).

An'rutf: (sterile) in Eg. mythol., one of the divisions or regions of Hades (Chapt. XVII, Book of the Dead); the N. gate of the House of Osiris.

an-sab': the Boetylian or sacred stones of the ancient Arabs, who anointed and worshipped them.

an-sa'ta: the tau cross, represented as the emblem of life. Cf. ankh.

An'shar: in Bab. mythol., the father of the gods.

an'ta: (1) in class. archit., a pilaster which forms the terminus of a side wall which goes beyond a cross wall, usually having special capitals; (2) in modern archit., a pilaster opposed to another, *as* on the jamb of a door. (Plur., *antæ*, *antes*.)

An'ta: in Eg. mythol., a war-goddess, wearing a white mitre like that of Osiris, and carrying battleaxe and spear; unknown before reign of Amenhotep I (XVIIIth Dynasty) and mainly worshipped by Rameses II and III.

An'taem-nekht': the favorite dog of Rameses II; he accompanied the king into battle.

An-tæ'us: in Gr. mythol., the giant son of Gaea and Poseidon, who compelled all strangers to wrestle with him, deriving fresh strength from each new contact with his mother (Earth), and proving invincible until Hercules lifted him clear of the ground and crushed him to death; the fight is a favorite subject of classic sculptors.

An-tal'si-das: the Spartan soldier-diplomat sent to Sardis in B. C. 393 to offer the Persians a treaty recognizing Persian claims to Asia Minor, thus undermining the relations of Athens with Persia (treaty concluded in 386); starved himself to death in 367 because a final mission to Persia failed.

an'te-ces'sor: (1) in Ro. hist., a soldier sent ahead of an army as a levying commissary to arrange camp sites, billeting, subsistence, etc.; (2) in the days of the Empire, a scholar who taught civil law.

An'tef: (1) the name of several kings of the XIth Eg. Dynasty; (2) a noted official of the XIIth Dynasty, close to the king, governor of Tanis and Abydos, and for a time a successful soldier; executed many important civic works and was noted for impartiality and mercy as an executive.

an'te-fix: in archit., a vertical ornament or block terminating the covering tiles on temple roofs and hiding the joints; usually ornamented with the carved or stamped anthemion decoration.

The words below all appear in articles contained in this number. Each archaeological term will appear later in its proper alphabetical position, fully defined and accented.

anthemion: the familiar palm-leaf, or other conventionalized leaf-or flower-design in the arts of Greece. (Gr. *anthos* = flower.)

astrolabe: the ancient spherical or planispheric instrument, generally of brass, used for determining altitudes in astronomy and navigation, familiarly once called the "mathematical jewel" (Gr. *astron* = star, and *labein* = to take).

biga: a chariot drawn by two horses.

caduceus: Mercury's baton, terminating in wings and having twin serpents coiled about it; once the symbol of the herald or messenger, since Mercury was the messenger of the gods.

chape: (in this case, probably) the projecting device or prong by which a sword is removably attached to the belt; usually, the tip of a scabbard.

Cnidian: pertaining to the two-harbored city of Cnidus, in Caria, Asia Minor, where the Venus of Cnidus (or Cnidian Aphrodite) was sculptured by Praxiteles.

Elgin marbles: the finest collection of Gr. marbles extant, consisting of parts of the Parthenon frieze, metopes and fragments of single statues, mostly of the Phidian school; brought from Greece to London in 1811 by the Earl of Elgin and now in the British Museum.

Garamantes: in ancient times a nomad tribe of the Fezzan and Sahara.

Pascha: (Gr.) Easter.

protean: easily and quickly variable; changeable; able to assume instant disguise or to modify appearance (from Proteus, a sea-god who could instantly assume any form he wished).

temenos: in Gr. anc. hist., a sacred enclosure, such as that surrounding a temple.

ziggurat: a terraced temple-tower peculiar to the ancient Assyrians and Babylonians.

BOOK CRITIQUES

Lucian, Satirist and Artist. By Francis G. Allinson, Litt. D., Professor of Greek Literature and History, Brown University. Pp. 204, 2 illustrations. Marshall Jones Company, Boston, 1926. \$1.75.

Æschylus and Sophocles, Their Work and Influence. By J. T. Sheppard, M. A., Litt. D., Fellow of King's College, Cambridge. Pp. 204, 2 illustrations. Longmans, Green & Co., New York. 1927. \$1.75.

Modern Traits in Old Greek Life. By Charles Burton Gulick, A. M., Ph. D., Eliot Professor of Greek Literature, Harvard University. Pp. 159. Longmans, Green & Co., New York. 1927. \$1.75.

These three books are notable additions to the volumes already published in the series known as *Our Debt to Greece and Rome*, edited by Professors George Depue Hadzsits and David Moore Robinson, making thirty-two out of the fifty-five volumes announced. It is to be noticed that while these are all of uniform appearance, the publication of the series has passed from Boston to New York, though the excellent Plimpton Press of Norwood, Mass., still does the actual printing.

As an editor of *Lucian*, Professor Allinson is well equipped for writing an appreciation of the great Syrian satirist. He gives a most readable account of the life and works of *Lucian* as well as of the age of the Antonines in which the satirist lived, and then, in the lengthy final chapter, discusses *Lucian's* "creditors and debtors". This is very well done, as far as it goes, and it may seem ungracious to suggest that more should have been made of *Horace* as a creditor (see Lejay's edition of *Horace's Satires*), while among the debtors a place should have been found for one who has been called the best nineteenth century representative of *Lucian*, viz., Lord Disraeli, whose brilliant extravaganzas, *Ixion in Heaven* and *The Infernal Marriage*, have been very popular on the other side of the Atlantic. And why not look into American literature for evidence of *Lucian's* influence? Surely *Bangs' Houseboat on the Styx* harks back to *Lucian*.

The volume on *Æschylus* and *Sophocles* divides its material with mathematical precision equally between "Antiquity" and "Modern Influences". In the former part there is a rather detailed account of the several

extant plays and of their influence in Greece and Rome. In the latter half their influence upon modern literature is ably traced in considerable detail, as evidenced in Italy, France, Germany and Great Britain. It would seem, however, that a book published in America should take some account, however slight, of American literature and even of living American poets who, like Edwin Arlington Robinson, William Ellery Leonard, and John G. Neihardt, have come under the spell of Greek tragedy. And if public performances of Greek plays in modern times are to be recorded, why should not mention be made of such conspicuous successes as have been witnessed at Harvard, Vassar, Stanford, Berkeley, and elsewhere?

The third book to be noticed "attempts to show how far the manners and customs of ancient Hellas have left their mark on the routine of our daily life". It takes us to the home, the school, the marketplace and the temple, and in a most entertaining and instructive manner gives us a vivid picture of the way the old Greeks lived, while it reminds us how many characteristics of antiquity still survive, either locally in Greece, or more widely in the world at large. To take a single example, we confess our indebtedness to Greece in the mere use of such words as academy, lyceum, gymnasium, paper, grammar, bible, history, geometry, logic, mathematics and music, to say nothing of the terminology of modern science.

There is at least one questionable statement in the book. Where has the author learned that "children in Canada could walk barefoot on the ice without discomfort or complaint?" The reviewer, who has lived half his life in Canada, can assure Professor Gulick that for a modern parallel to this kind of Socratic virtue one might as well go to Massachusetts as to Canada. But then there are the Menonites!

H. RUSHTON FAIRCLOUGH.

Kings of the Hittites. The Schweich Lectures, 1924. By David George Hogarth. Pp. viii, 67. 51 illustrations. Oxford University Press, London, 1926. \$2.

Great expectations are raised by this little book from the pen of the veteran student of

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things Hittite. In part, our expectations are disappointed, for we are not to hear of the mighty kings of the empire which contended with Egypt. Hogarth goes so far as to say in his preface: "I remain not less doubtful of the propriety of using most of 'the cuneiform archives' as historical material than I was when I contributed to the second and third volumes of the Cambridge Ancient History."

The truth is that a considerable number of these tablets are in Babylonian which we can read as easily as a Greek inscription or papyrus. As for the tablets in unknown languages, thanks to the peculiarities of the cuneiform script, we may treat them as we do a broken Greek inscription, and win the half of the content without regard to any "decipherment". On the other hand, the pictographic inscriptions, vainly attempted by Cowley in an earlier series of Schweich lectures, still remain a mystery.

Hogarth takes "Kings of the Hittites" in the Biblical sense, and confines his study to North Syria, with excursions across the Euphrates and the Taurus. His presentation of the results of excavations at Zengirli, Sakjegeuzi, and Carchemish, will be welcome to those who do not have access to the more elaborate publications.

The core of his book is a closely worked out argument for a theory of Hittite origins. North Syrian art is dated from the eleventh to the eighth century. Its connection with the monuments of the imperial age in Cappadocia is at best remote. Its origin is to be found in Mesopotamia, whence it was carried to Asia Minor by the Mushki.

Hogarth gives little documentation and his arguments are presented briefly. They are directly opposed to the views current today. Adequate review would require an article as long as his book. Much debate will ensue before they are accepted.

A. T. OLMSTEAD.

Pieter Brueghel The Elder, A Study of His Paintings, by Virgil Barker. Pp. 64, 55 plates. The Arts Publishing Corporation. New York, 1926. \$2.

Last year *The Arts* magazine published a special number containing a very comprehensive monograph by its European correspondent on the elder Brueghel. So heavy was the demand for this issue, it was quickly evident to the publishers that a real demand

existed for an authoritative and well-illustrated survey of the remarkable XVIth century Dutch painter and his work. Instead of reprinting the magazine, the wiser course was adopted of increasing the illustrations to include practically all of Brueghel's canvases and give the essay permanent form. The result is a slim, attractive, strongly bound, practical book—fortunately at a moderate price—which makes an illuminating record of the Flemish humanities some four centuries ago. Not all students of art will agree with Mr. Barker's judgments, which oftentimes betray more enthusiasm than sobriety, nor will his estimate of Brueghel's messy habit of attempting to crowd everything into a small area be accepted as final. Draftsmanship alone—or even with the addition of powerful color, a facility amounting to genius in handling genre themes, and an excellent sense of human values—does not necessarily convey perfection. Unconscious of Self the painter may well be but the encyclopaedia is rarely given rank with the penetrating essay as a work of great art. It is Brueghel's irony, visible oftentimes with the flashing intensity of lightning, that lifts some of his work out of the story-telling class into that of genuine comment upon human foibles. The book is distinctly valuable as the first English work on a painter too long neglected, and has the further important advantage of being the only reasonably priced work on the subject in any language.

A. S. R.

Studio Handbook, Letter and Design. By Samuel Welo. Pp. 232, hand lettered and illustrated throughout. Frederick J. Drake & Co., Chicago, Ill. 1927. \$2.

This is a useful little manual for the desk or table of the artist who has to design lettering and ornament for poster and advertising purposes. It might also well be kept handy by the editorial worker for its use as a style-guide in the choice of regular, fancy and special type for special purposes, or to guide his engraver's artist in preparing special initials, ornaments, etc. Included with its wide variety of standard forms are many of those dreadful hybrid styles of modern lettering which by no stretch of imagination can be described as anything but bastard, and whose sole use is to shriek in weird falsetto the dubious merits of commodities the manufacturers seem to realize can be vended in no other way.

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